



Documentation for the 2004–05 Teacher Follow-up Survey

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Chapter 1. Overview

The Teacher Follow-up Survey (TFS) is sponsored by the National Center for Education Statistics (NCES) on behalf of the U.S. Department of Education and is conducted by the U.S. Census Bureau.

TFS is a follow-up survey of selected elementary and secondary school teachers who participated in the Schools and Staffing Survey (SASS).¹ SASS is the largest, most extensive survey of kindergarten through 12th grade (K–12) school districts, schools, teachers, and administrators in the United States today. It provides data on the characteristics and qualifications of teachers and principals, teacher hiring practices, professional development, class size, and other conditions in schools across the nation. TFS focuses on a sample of teachers who participated in SASS, including those teachers who left the K–12 teaching profession and those who continue to teach.

TFS includes teacher data from public (including public charter) and private schools, similar to SASS. However, TFS does not include teachers who taught in a school funded by the Bureau of Indian Affairs (BIA) during the SASS school year due to insufficient sample sizes in TFS. Together, SASS and TFS data provide a multitude of opportunities for analysis and reporting on elementary and secondary educational issues.

Background

TFS is a follow-up of selected teachers from the SASS teacher surveys and is conducted during the school year following the SASS administration. It was conducted in the 1988–89, 1991–92, 1994–95, 2000–01, and 2004–05 school years (after the 1987–88, 1990–91, 1993–94, 1999–2000, and 2003–04 administrations of SASS, respectively). NCES currently plans to conduct the next survey in the 2008–09 school year; it will collect data from a subsample of teachers who participate in the 2007–08 SASS.

Over time, the philosophy behind TFS has changed. The 2004–05 TFS more closely resembled the SASS teacher questionnaires than in any of the previous TFS administrations. There was a greater overlap of TFS and SASS teacher items, and there were fewer items unique to TFS, other than items pertaining to leaving last year's teaching position. When examined together, the results of TFS and SASS can give researchers insight on many different educational issues, including the retention of teachers in public and private schools and teachers' job satisfaction.

Congress, state education departments, federal agencies, private school associations, teacher associations, and educational organizations have used data from the 1988–89, 1991–92, 1994–95, and 2000–01 surveys. In particular, results of these prior administrations have been used to analyze changes in the teacher labor force over time, to develop incentive programs to encourage teacher retention, and to understand the effects of school practices and policies on a teacher's decision to continue teaching or leave the K–12 teaching profession.

Purpose and Content of the Survey

TFS is a one-time follow-up to the SASS teacher questionnaires and is conducted during the school year following SASS. The major objectives of the 2004–05 TFS are to measure the attrition rate for teachers, examine the characteristics of teachers who stayed in the teaching profession and those who left or retired, obtain activity or occupational data for those who left the position of a K–12 teacher, obtain

¹ For a complete description of the 2003–04 Schools and Staffing Survey, see *Documentation for the 2003–04 Schools and Staffing Survey* (Tourkin et al. 2007).

current teaching assignment information for those who are still teaching, and collect data on attitudes about the teaching profession in general and job satisfaction in particular. All basic demographic information about each teacher (e.g., race and ethnicity information) is collected on the SASS teacher questionnaires. TFS data can be linked to SASS data to provide contextual data on relationships between local districts and school policies and practices, teacher characteristics, and teacher attrition and retention.

TFS is composed of two questionnaires: the Questionnaire for Former Teachers (Form TFS-2), which collects information about sampled teachers who left the K–12 teaching profession after the 2003–04 school year, and the Questionnaire for Current Teachers (Form TFS-3), which collects information on sampled teachers who currently teach students in any of grades prekindergarten through 12.

Questionnaire for Former Teachers (Form TFS-2)

The purpose of the 2004–05 former teacher questionnaire was to obtain information about those respondents who left teaching within the year after SASS, such as their present occupation or activity, educational plans, reasons for leaving teaching, intent to return to teaching, attitudes about teaching, and demographic characteristics.

The 2004–05 Questionnaire for Former Teachers had the following six sections:

- *Section I—Employment Status* collected general information about employment, salary and supplemental income, attitude on remaining in current position, retirement, and retirement plans.
- *Section II—Information on Leaving the Teaching Profession* obtained information about the factors that influenced the decision to leave the position of a K–12 teacher.
- *Section III—Your Impressions of Teaching and of Your Current Job* collected information about the performance of last year’s principal or school head, state or district assessment programs, and satisfaction with current job relative to teaching.
- *Section IV—Education Activities and Future Plans* collected information about recent enrollment in college or university courses and the possibility of returning to the position of a K–12 teacher in the future.
- *Section V—Background Information* obtained information about family income, household characteristics, marital status, and internet access.
- *Section VI—Contact Information* requested that respondents provide their personal contact information as well as contact information for two additional people who would be able to reach them in the event that they relocate.

Questionnaire for Current Teachers (Form TFS-3)

The purpose of the 2004–05 current teacher questionnaire was to obtain information about current teachers, including teachers who continued to teach in the same school as in the previous year and those who changed schools. It contains information about their current teaching assignments, attitudes about teaching, attitudes about last year’s school, expected duration in teaching, plans for further education, and demographic characteristics.

The 2004–05 Questionnaire for Current Teachers had the following six sections:

- *Section I—Certification and Assignments at Your Current School* collected information about general teaching status, subjects taught, teaching certification, grade levels taught, organization of classes, students taught having an Individual Education Plan (IEP), and students taught who had limited-English proficiency (LEP).

- *Section II—Your Current School: Conditions and Experiences* obtained information on experiences and working conditions at the current school, student problems, school problems, attitudes and perceptions about teaching at the current school, hours worked and time allocation, and participation in additional school-related activities.
- *Section III—Information About Changes From Last School Year to This School Year* collected information about whether the teacher is teaching at the same school as the previous year, general information about the new school (if the teacher changed schools), factors that influenced the decision to leave the previous school (if the teacher changed schools), performance of last year’s principal or school head, attitudes and perceptions about state or district assessment programs at last year’s school, and satisfaction with current teaching position relative to last year’s teaching position.
- *Section IV—Education Activities and Future Plans* collected information about recent enrollment in college or university courses, attitude about remaining in teaching, attempt to leave the position of a pre-K–12 teacher, and retirement.
- *Section V—General Employment and Background Information* obtained information about teacher salary and supplemental income, family income, household characteristics, marital status, and internet access.
- *Section VI—Contact Information* requested that respondents provide their personal contact information as well as contact information for two additional people who would be able to reach them in the event that they relocate.

Target Population and Estimates

Target Population

The 2004–05 TFS sample was based on interviewed public (including public charter) and private school teachers who taught students in any of grades K–12 or in comparable ungraded levels during the previous year’s SASS. The sample of teachers selected included those who left the position of a K–12 teacher within the year after SASS (leavers). It also included those who continued to teach students in any of grades pre-K–12 or in comparable ungraded levels, including teachers who remained in the same school as in the previous year (stayers) and who changed schools (movers); prekindergarten was included so that sampled teachers who changed assignments from teaching students in any of grades K–12 to teaching only prekindergarten students would not be considered leavers.

In SASS, the sampling frame for public schools was an adjusted version of the 2001–02 Common Core of Data (CCD), and the sampling frame for private schools was a modified version of the 2003–04 Private School Universe Survey (PSS) sample. The sampling frame for the SASS teacher questionnaires consisted of lists of teachers provided by schools in the SASS sample. A teacher was defined as a staff member who taught a regularly scheduled class to students in any of grades K–12 or comparable ungraded levels.

Estimates

SASS was designed to produce national, regional, and state estimates for public elementary and secondary schools teachers; and national, regional, and affiliation group estimates for private school teachers.

The SASS teacher survey was designed to support comparisons between new and experienced public school teachers (3 years or less of experience vs. more than 3 years of experience) at the state level and

new and experienced private school teachers at the affiliation level. Comparisons among teachers by race and by full-time or part-time status are possible at the national level.

TFS was designed to produce national comparisons for current teachers and former teachers by school type (public or private), school level (elementary, secondary, or combined), new versus experienced, and nonminority versus minority.

Methodology

TFS is a survey that uses paper-based questionnaires that are mailed to sampled teachers for their completion. In addition to the two paper questionnaires, the 2004–05 TFS included an internet reporting option. The internet version of TFS included all of the same items from the paper questionnaires, but had automated skip patterns that presented only the appropriate questions to the respondent. An internet option was offered to a portion of the respondents with the hope that it would increase, or at least maintain, overall survey response rates while helping to reduce reporting errors by respondents in the surveys through the use of these automated skip patterns and edits.²

In order to draw the sample for TFS, the first step was to mail a Teacher Status Form (Form TFS-1) to all schools in which teachers completed a SASS teacher questionnaire in the 2003–04 administration of SASS. A knowledgeable person at the school, such as the principal, was asked to complete the status form by indicating the current teaching status of each teacher listed on the form. All of the teachers listed on the Teacher Status Form were sampled for SASS, but they may not have responded to the survey. If a teacher listed on the Teacher Status Form did not respond to SASS, he or she was not included on the sampling frame for TFS. The current teaching status as reported for the SASS teacher was used to determine which form, either the current or former teacher questionnaire, would be mailed to each sampled teacher. Then the Census Bureau clerical processing staff in Jeffersonville, Indiana, mailed either the current or former teacher questionnaires or letters providing an internet user name and password to the sampled teachers who had provided a home address on the SASS questionnaire. When no home address was provided by movers and leavers, these cases became part of an address research operation conducted by the Census Bureau to find a valid address. For stayers without home addresses, questionnaires or letters providing the internet user name and password were sent to their current school.

Approximately 5 weeks after the first mailout of both TFS questionnaires, respondents for which an interview was not obtained were sent a second paper questionnaire for completion. This second mailout group included those who either had not yet completed and returned their paper questionnaires or had not yet completed the internet form. An additional 5 weeks later, the cases for which a questionnaire still was not completed were sent to Census Bureau field staff who conducted follow-up using a combination of telephone interviews and personal visits.

If an interview was still not obtained during field follow-up, the case was determined to be a noninterview. TFS respondents who were deceased, had moved out of the United States, or had never been teachers (i.e., incorrectly completed the 2003–04 SASS teacher questionnaire) were determined to be out of scope for the survey. For more information about the interview status of TFS questionnaires, refer to the interview status recode (ISR) sections of chapter 6.

² The internet option was implemented as part of a test. For a complete description of the test and results, see “Appendix E. (Inter) Net Gain? Experiments to Increase Response.”

Contents of the Manual

This report contains chapters on preparation for the 2004–05 TFS, frame creation and sample selection procedures, data collection, response rates, data processing, imputation procedures, weighting and variance estimation, a review of the quality of TFS data, structure of TFS data files and information on merging data files, and user notes and cautions.

Information in the chapters is supported by material in the following appendixes.

- A. Key Terms for TFS;
- B. TFS Questionnaire Availability;
- C. Summary of TFS Interview Findings and Recommendations;
- D. Summary of TFS Pretest and Usability Test Findings and Recommendations;
- E. (Inter) Net Gain? Experiments to Increase Response;
- F. Quality Assurance for TFS Keying and Mailout Operations;
- G. Changes Made to TFS Variables During Computer Edits, by Data File;
- H. Percentage of TFS Variables Changed During Three Stages of Imputation, by Data File;
- I. Weighting Adjustment Cells;
- J. Frame and Created Variables; and
- K. Crosswalk of 2004–05 TFS Items with 2000–01 TFS and 2003–04 SASS Teacher Questionnaire.

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Chapter 2. Preparation for the 2004–05 TFS

The National Center for Education Statistics (NCES) and the U.S. Census Bureau continually work to improve questionnaires and procedures for the Schools and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS). Prior to the administration of the 2004–05 TFS, the survey items and methodology were tested and improved. In an effort to develop questionnaire items that would accurately capture current and former teachers' responses to the key questionnaire items, a series of cognitive interviews were conducted to identify problems that could be corrected prior to the survey's administration. The results from the first cognitive study were used to make revisions to the survey items, and a second, small-scale study was conducted to test some of these key revisions. This second study also was a usability test³ on an internet instrument, which was added as a reporting method for the 2004–05 administration of TFS.

Cognitive Interviews and Usability Tests

Study One

In March 2004, the Census Bureau contracted with ORC Macro, a research and evaluation company in Calverton, Maryland, to carry out an initial round of cognitive interviews. The purpose of these interviews was to gather feedback from both current and former teachers on several proposed questions for the 2004–05 administration of TFS. Details on methodology and findings can be found in “Appendix C. Summary of TFS Interview Findings and Recommendations.”

The test included items on

- employment outside of teaching;
- remaining in current position;
- retirement;
- decision to leave K–12 teaching/last year's position;
- last year's/current school;
- last year's/current teaching position;
- last year's/current principal or school head;
- state or district assessment exams;
- certification;
- education activities;
- returning to teaching; and
- marital status.

Methods

All cognitive interviews were conducted by trained interviewers, with each interview lasting approximately 90 minutes. Interviews were predominantly conducted on an individual basis, but some were conducted in pairs or groups, and some were conducted over the telephone. The interviews were conducted using a “think aloud” protocol, where each respondent was asked to describe what they were

³ A usability test is a way to identify how users actually interact with a system (in this case, the TFS internet instrument). The goal of a usability test is to find out what is and is not working well in the instrument. In this test, respondents were instructed to describe aloud what they were thinking as they moved through the TFS internet questionnaire. Meanwhile, trained interviewers observed, asked probing questions, listened, and took notes.

thinking out loud as they completed the questions. In addition, some follow-up questions were asked after the respondent completed certain questionnaire items.

Interviews were carried out with current and former teachers in Alaska, Maine, Maryland, Massachusetts, New Hampshire, New York, and Virginia, and the District of Columbia. Respondents were offered a \$60 incentive for their participation in these cognitive interviews.

Key Findings

A summary of the recommendations from the cognitive interviews follows:

- Eliminate items concerning future eligibility for retirement benefits.
- Adjust the order in which retirement items appear to make them seem less redundant.
- Eliminate items that were difficult for the respondent to answer, such as the respondent’s second and third most important reasons for leaving teaching.
- Eliminate items about performance on assessments at the current school, because assessment exams may not have been administered prior to the survey in the current school year.
- Reword several questions and instructions for better clarity and uniform understanding.
- Modify answer choices to questions concerning how long the respondent plans to remain in his or her current position to include specific life events that may occur (e.g., parenthood or marriage).
- Change column title from “No difference” to “No better/worse in either position” in items that compare the current position to the former position.

Study Two

The Questionnaire for Former Teachers (Form TFS-2) and the Questionnaire for Current Teachers (Form TFS-3) were revised based upon the recommendations from the previous cognitive interview study. As a result, in July and August 2004, Census Bureau staff conducted a second series of cognitive interviews to test some of the key revisions. This second set of cognitive interviews also was a usability test of the newly developed internet instrument. Details on methodology and findings can be found in “Appendix D. Summary of TFS Pretest and Usability Test Findings and Recommendations.”

The test focused on

- questionnaire content and wording—
 - if respondents were able to interpret the questions uniformly;
 - if respondents were able to provide the information that was requested; and
 - if respondents were able to accurately answer the series of retirement questions; and
- internet usability—
 - if respondents were able to log in and use the internet version of the instrument;
 - if navigation through the instrument was clear and efficient;
 - if respondents found it challenging to respond using the radio buttons; and
 - if automated edits were clear, helpful, and appropriate given the respondent’s answers.

Methods

All interviews were conducted by trained interviewers and were video recorded with the respondent’s permission. The sample contained 24 respondents and was drawn from current and former teachers in the District of Columbia and Baltimore, Maryland, metropolitan areas. Interviews were conducted in the

Census Bureau usability lab or the respondent’s home or workplace. Each respondent was offered a \$50 incentive for participating in this cognitive interview study.

Key Findings

A summary of the recommendations from the pretest cognitive interviews follows:

- Questionnaire content and wording—
 - Change wording of items to provide clarity.
 - Change all items that contain the phrase “K–12 teaching” to instead say “the position of a K–12 teacher” to prevent respondent confusion.
 - Change answer formats of Individual Education Plan (IEP)/limited-English proficiency (LEP) questions from write-ins to answer choices.
 - Add specific directions to items so that the respondent could more accurately provide the requested information.
 - Change wording and merge together some of the retirement items.
- Internet usability—
 - Change the organization of the main menu to eliminate respondent confusion about starting or resuming the questionnaire.
 - Change the navigation portion of each screen, allowing respondents to advance or return to other items or sections on the questionnaire.
 - Modify dropdown boxes to make it easier for respondents to select the appropriate answer choice.

Content Changes

The TFS questionnaires were revised substantially from the 2000–01 versions prior to the testing. After both cognitive interview studies, both questionnaires were revised further based upon the results of the studies. As a result of both processes, the following additions, deletions, and revisions were made to the TFS questionnaires between the 2000–01 and 2004–05 administrations.

Changes to the Questionnaire for Former Teachers

Items Added to the Questionnaire for Former Teachers

The following topics were added to the former teacher questionnaire between the 2000–01 and 2004–05 administrations of TFS:

- maternity or paternity leave, disability leave, or sabbatical;
- supplemental income;
- retirement items;
- most important reason for leaving the position of a K–12 teacher;
- impressions of state or district assessment programs;
- enrollment in college or university courses since last school year;
- lowest teaching salary accepted to return to teaching;
- last year’s marital status;
- living situation;
- internet access; and
- contact information.

Items Deleted From the Questionnaire for Former Teachers

The following topics were deleted from the former teacher questionnaire between the 2000–01 and 2004–05 administrations of TFS:

- main activity during the next school year;
- factors that influence retirement;
- years to remain in teaching if retirement were not an option;
- impressions of last year's school;
- impressions of teaching;
- degree programs and degrees earned in the past 12 months; and
- changes to teaching certification.

Items Revised on the Questionnaire for Former Teachers

The following items on the former teacher questionnaire were revised between the 2000–01 and 2004–05 administrations of TFS:

- Questions concerning current occupation were revised, and the new series does not ask for specific employer and type of business or industry.
- Question concerning how long the respondent plans to remain in current position was revised to give more options concerning retirement, retirement benefits, and specific life events.
- The section on reasons for leaving teaching was revised and includes fewer reasons.
- Questions that rate current position relative to teaching were revised to incorporate social aspects, personal life, accomplishment, and influencing the lives of others.
- Factors influencing the decision to return to teaching were revised to incorporate more factors.

Changes to the Questionnaire for Current Teachers

Items Added to the Questionnaire for Current Teachers

The following topics were added to the current teacher questionnaire between the 2000–01 and 2004–05 administrations of TFS:

- class organization;
- Individual Education Plan (IEP) and limited-English proficiency (LEP);
- general and student problems at current school;
- opinions about current school and the teaching profession;
- hours and time allocation;
- participation in school-related activities;
- grades offered in current school;
- most important reason for leaving last year's school;
- impressions of state or district assessment programs;
- rating current teaching position relative to last year's teaching position;
- enrollment in college or university courses since last school year;
- attempt to leave teaching;
- collecting pension or drawing funds from 401(k) or 403(b) plan;
- contributions to teacher retirement plan or 401(k) or 403(b) plan;
- last year's marital status;

- living situation;
- internet access; and
- contact information.

Items Deleted From the Questionnaire for Current Teachers

The following topics were deleted from the current teacher questionnaire between the 2000–01 and 2004–05 administrations of TFS:

- secondary teaching assignment fields and certifications;
- overall satisfaction with teaching in current school;
- overall satisfaction with teaching in last year’s school;
- overall satisfaction with the teaching profession;
- impressions of instructional leader at current school;
- impression of administrators and staff at current school;
- impression of administrators and staff at last year’s school;
- impressions of last year’s school;
- planning and preparation time;
- hours and time allocation outside of teaching;
- computer use in the classroom;
- technology in the classroom;
- whether the new school is a public charter school; and
- degree programs and degrees earned in the past 12 months.

Items Revised on the Questionnaire for Current Teachers

The following items on the current teacher questionnaire were revised between the 2000–01 and 2004–05 administrations of TFS:

- Questions concerning current school conditions and experiences were revised to include fewer items.
- Reasons for leaving last year’s school were revised to include fewer items.
- Question concerning how long the respondent plans to remain in teaching was revised to give more options concerning retirement, retirement benefits, and specific life events.

Final Content of the 2004–05 TFS

The following is a brief summary of the major content areas for the 2004–05 TFS. For further details about the specific sections and content of each survey, please refer to chapter 1.

- The Questionnaire for Former Teachers obtained information such as present occupation or activity, educational plans, reasons for leaving teaching, intent to return to teaching, attitudes about teaching, plans for further education, and demographic characteristics.
- The Questionnaire for Current Teachers obtained information about current teaching assignments, attitudes about teaching, attitudes about last year’s school, expected duration in teaching, plans for further education, and demographic characteristics.

Copies of the 2004–05 TFS questionnaires may be obtained on the Internet at <http://nces.ed.gov/surveys/sass/questionnaire.asp> or by e-mail to SASSdata@ed.gov.

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Chapter 3. TFS Frame Creation and Sample Selection Procedures

This chapter describes the frame creation and sampling process for the Teacher Follow-up Survey (TFS) sample. Teachers sampled for TFS were drawn from the Schools and Staffing Survey (SASS) sampled teachers who had completed interviews; those teachers were in turn drawn from the SASS sampled schools. This chapter begins with a brief description of the creation of the SASS school sampling frames. Next, the school sampling procedure is described, followed by the SASS teacher sampling process, and finally the TFS teacher sampling process.

Note that Bureau of Indian Affairs (BIA) funded schools and teachers were included in the SASS school and teacher sampling process and thus were also included in the TFS teacher frame. However, because there were so few teachers from BIA-funded schools in the TFS frame, they were dropped from the TFS sample. Therefore, the TFS sampling section of this chapter will not include any details on teachers from BIA-funded schools.

SASS Sampling Frames

Public School Sampling Frame

The public school sampling frame was based on the 2001–02 school year Common Core of Data (CCD). CCD is collected annually by the National Center for Education Statistics (NCES) from all state education agencies and is believed to be the most complete public school listing available. The frame includes traditional public schools, schools on Department of Defense military bases, BIA-funded schools, public charter schools, and nonregular schools such as special education, vocational, and alternative schools. Extensive modifications to CCD (as described below) resulted in 90,239 schools on the SASS public school sampling frame.⁴

In order to include only schools that met the definition of a school in SASS, schools were eliminated from and added to the sampling frame. In SASS, a school was defined as an institution or part of an institution that provides classroom instruction to students, has one or more teachers to provide instruction, serves students in one or more of grades 1–12 or the ungraded equivalent, and is located in one or more buildings. SASS is confined to the 50 states plus the District of Columbia and excludes territories and overseas schools. The SASS definition of a school was generally similar to CCD with some exceptions. CCD contained some schools that did not offer teacher-provided classroom instruction that included academic subjects in grades 1–12 or the equivalent ungraded levels. In some instances, schools in CCD were essentially administrative units that may have overseen entities that provided classroom instruction, or the school on CCD may have provided funding and oversight only. CCD also included schools located overseas that were operated by the Department of Defense. Consequently, schools that were ineligible for SASS and deleted from the sampling frame included schools operated overseas by the Department of Defense, adult education centers, schools in which the highest grade offered was prekindergarten or kindergarten, homeschools, tutoring services, or administrative units.

In addition, school records that appeared to have a common administration and were housed in one building were collapsed into a single school. The schools that met the criteria often offered grades K–12 in the same building or administrative unit. Because of this, these schools often perceive themselves differently than the state does (i.e., as a single entity as compared to several separate schools). For this

⁴ For the 2001–02 school year, CCD included data on 97,623 schools.

reason, it was decided for the 2003–04 SASS to collapse the CCD records whenever it was believed that this problem was likely to occur.

SASS added schools in Pennsylvania and California after having directly contacted their administrative units as reported on CCD. These administrative units oversee certain types of educational entities (e.g., special education schools, juvenile justice facilities) within various California and Pennsylvania counties. This type of education is often provided at a number of locations within a particular county, but not necessarily at schools listed on CCD. To avoid confusion, these administrative units were contacted by phone, and requested to provide a list of the schools they oversaw. These lists were subsequently matched to CCD. If any of the schools from these lists were not already on CCD, they were added to the SASS sampling frame at that time. (For more details, see *Documentation for the 2003–04 Schools and Staffing Survey* [Tourkin et al. 2007].)

Finally, corrections and/or imputations to the school records were made to facilitate the school sampling process. These corrections included filling in and/or modifying missing grade ranges, total enrollments, enrollment by race, teacher totals, physical location components, and the school's name.

The resulting number of schools on the 2003–04 SASS public school frame was 90,239. Of these, 166 were BIA-funded schools and 2,309 were public charter schools. Additional out-of-scope schools were detected during data collection and the processing of the sampled schools' SASS school questionnaires. These schools were eliminated from further processing of the school sample and were not part of any SASS estimates of the number of schools.

Private School Sampling Frame

The sampling frame for private schools was the updated 2003–04 Private School Universe Survey (PSS) list frame updated with the 2001–02 PSS area frame. The area frame serves as a coverage improvement for the list frame.

- *List frame.* The list frame used for the 2003–04 SASS private school sample was the same list used for the 2001–02 PSS, updated in the spring of 2003 using lists from 26 private school associations and all 50 states and the District of Columbia. The resulting frame was also used for the 2003–04 PSS.
- *Area frame.* The SASS area frame consisted of a list of private schools that had not been included in the PSS universe and had not been reported by state or private school associations during the list frame updating operation. These schools were located in 116 selected primary sampling units (PSUs) throughout the United States.

Closed schools and out-of-scope schools (i.e., adult education centers, schools where the highest grade was prekindergarten or kindergarten, homeschools, or tutoring services) were deleted from the private school file before sampling. As with the public school frame, there were several corrections and/or imputations that needed to be made to school records in order for sampling to proceed. These corrections and/or imputations included modifying or filling in information for the school's grade range, affiliation, total student enrollment, and teacher counts.

The resulting number of schools on the 2003–04 SASS private school frame was 29,303 list frame schools and 179 area frame schools. As with the public schools, any additional out-of-scope schools detected during data collection or the questionnaire processing were eliminated from any SASS estimates. Thus, SASS estimates do not agree with the frame counts.

SASS School Stratification

Stratification refers to the process of subdividing the population frame into mutually exclusive subsets (called strata) from which samples of schools are selected at appropriate rates.

Public School Stratification

The first level of stratification for public and BIA-funded schools was assignment to school types A through E, as follows:

- school type A included BIA-funded schools, which were selected with certainty (automatically in sample);
- school type B included public schools with high American Indian or Alaska Native enrollment (schools with 19.5 percent or more American Indian or Alaska Native students);
- school type C included schools in Delaware, Maryland, Florida, Nevada, and West Virginia, where at least one school from each district was selected, as described in the “SASS School Sample Selection” section below;⁵
- school type D included public charter schools; and
- school type E included all other schools.

Schools falling into more than one category were assigned to types A, B, D, C, and E, in that order. For example, if a school were identified as BIA-funded as well as public charter, the school would be considered BIA-funded for stratification purposes.

The second level of stratification varied by school type, as described below:

- All type A schools were selected for the sample, so no additional stratification was needed.
- Type B schools (i.e., high American Indian or Alaska Native enrollment schools) were stratified by state, as follows: Arizona, California, Montana, New Mexico, Washington, the remaining Western states, Minnesota, North Dakota, South Dakota, the remaining Midwestern states, North Carolina, Oklahoma, and the remaining states. Note that Alaska was excluded from this group of strata because most schools in Alaska have a high Alaska Native enrollment and because the sampling rate applied to Alaska schools was higher than the sampling rate applied to other schools with high American Indian or Alaska Native student enrollment. Thus, schools in Alaska were generally included in type E.
- Type C schools (i.e., schools in Delaware, Maryland, Florida, Nevada, and West Virginia) were stratified first by state and then school district. For details, see *Documentation for the 2003–04 Schools and Staffing Survey* (Tourkin et al. 2007).
- Type D schools (i.e., public charter schools) were stratified by state, as follows: Arizona, California, Colorado, the remaining Western states, Michigan, Ohio, Wisconsin, the remaining Midwestern states, Florida, North Carolina, Texas, the remaining Southern states, Pennsylvania, and the remaining Northeastern states.
- Type E schools (i.e., all other schools) were stratified by state, as follows: all states including the District of Columbia, except those states in type C (i.e., Delaware, Maryland, Florida, Nevada, and West Virginia).

⁵ A 2003 simulation study showed that standard errors from Delaware, Florida, Maryland, Nevada, and West Virginia were high relative to the sampling rate in SASS. To reduce the standard error, all districts in these states were defined as school sampling strata. For more details, see *Documentation for the 2003–04 Schools and Staffing Survey* (Tourkin et al. 2007).

Each of the school types, B through E, was then stratified by school level (i.e., elementary, secondary, and combined), as defined below:

- Elementary = lowest grade ≤ 6 and highest grade ≤ 8 .
- Secondary = lowest grade ≥ 7 and highest grade ≤ 12 .
- Combined = lowest grade ≤ 6 and highest grade > 8 , or school is ungraded.⁶

Private School Stratification

List Frame

The list frame was partitioned into an initial set of cells using affiliation stratum (17 groups), school level (3 groups), and Census region (4 groups). These cells were defined using 2001–02 PSS data. For any school records that were missing information for these three variables, the data were imputed.

The first level of stratification was school affiliation stratum (17 groups):

- Catholic—parochial;
- Catholic—diocesan;
- Catholic—private;
- Amish;
- Assembly of God;
- Baptist;
- Episcopal;
- Jewish;
- Lutheran Church—Missouri Synod;
- Wisconsin Evangelical Lutheran Synod;
- Mennonite;
- Pentecostal;
- Seventh-Day Adventist;
- other religious;
- nonsectarian—regular;
- nonsectarian—special emphasis; and
- nonsectarian—special education.

Within each affiliation stratum, schools were stratified by school level (i.e., elementary, secondary, and combined schools). The definitions are provided below:

- Elementary = lowest grade ≤ 6 and highest grade ≤ 8 .
- Secondary = lowest grade ≥ 7 and highest grade ≤ 12 .
- Combined = lowest grade ≤ 6 and highest grade > 8 , also includes ungraded schools.⁶

Within affiliation stratum/school level, all private schools were stratified by the four Census regions:

- Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont);

⁶ Ungraded schools refer to schools that serve students whose grade levels are not defined as grade 1 through 12. For example, special education centers and alternative schools often classify their students as ungraded.

- Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin);
- South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia); and
- West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming).

Area Frame

All private schools from the area frame were automatically included in the sample, so no stratification was necessary.

SASS School Sample Selection

Public School Sample Selection

To facilitate the calculation of school district weights, it was important that within a stratum all schools belonging to the same school district be listed together. This could have been achieved by sorting by the district's CCD identification number, called the Local Education Agency (LEA) ID, first. However, to increase the efficiency of the school sampling design, it was better to sort by other variables first before LEA ID. To achieve both these goals, the ZIP code variables were recoded to make them the same for every school within a stratum/school district. After the ZIP code was recoded, non-BIA-funded schools were sorted, hierarchically, by the following variables:

1. Stratum code (assigned as described in the "SASS School Stratification" section above);
2. State (one for each state and the District of Columbia);
3. Locale code—
 - 1 = large central city,
 - 2 = midsize central city,
 - 3 = urban fringe of large central city,
 - 4 = urban fringe of mid-size central city,
 - 5 = large town,
 - 6 = small town,
 - 7 = rural, outside Metropolitan Statistical Area (MSA), and
 - 8 = rural, inside MSA;
4. Recoded ZIP code (all schools in a specific stratum/district have the same value for this variable);
5. LEA ID (school district's CCD ID);
6. School's highest grade offered (in descending order);
7. Recoded percent minority (in descending order) and defined as:
 - 1 = less than 5.5 percent minority enrollment or unknown,
 - 2 = at least 5.5 percent but less than 20.5 percent minority enrollment,
 - 3 = at least 20.5 percent but less than 50.5 percent minority enrollment, and
 - 4 = at least 50.5 percent minority enrollment;
8. Total enrollment (in serpentine sort order defined as: enrollment sorted first in ascending then descending order within the other sort variables); and
9. CCD school ID.

This sort order differs slightly from the sort used in previous SASS cycles. The third and fourth variables (locale code and recoded ZIP code) allowed a geographic balance within locale at the state level to be

achieved. The fifth variable (LEA ID) guaranteed that schools within a district and school stratum would stay together. The sixth variable (school's highest grade) allowed the sample size requirements for middle schools to be met,⁷ and the seventh variable (recoded percent minority) allowed a balance with respect to race/ethnicity. The eighth variable (school enrollment) also allowed a balance with respect to school size. The ninth variable, school ID, made the sort unique and therefore possible to reproduce.

Within each stratum, all non-BIA-funded schools were systematically selected for the sample from a hierarchically sorted list using a probability proportional to size algorithm. In applying this algorithm, a measure of size for each non-BIA-funded school was used to determine whether the school was selected with certainty, or whether a probability sampling procedure was applied. The measure of size, used to define the probability of selection for the schools, was the square root of the number of full-time equivalent teachers reported for each school or imputed during the sampling frame creation. Any school with a measure of size greater than the sampling interval (a measure of the spread between selected sample units in systematic sampling) was included in the sample with certainty (automatically) and excluded from the probability sampling operation. The BIA-funded schools were also selected for the sample with certainty. This produced a non-BIA sample of 10,202 (455 public schools with a high American Indian enrollment, 303 public charter schools, and 9,444 other public schools) and a BIA-funded sample of 166 schools for a total of 10,368 public and BIA-funded sample schools in 2003–04 SASS.

Private School Sample Selection

Within each stratum, sorting took place on the variables listed below. Sorting serves to improve the efficiency of the overall design.

1. State (one for each state and the District of Columbia);
2. School's highest grade offered (in descending order);
3. Locale code based on 1990 Census geography—
 - 1 = large central city,
 - 2 = mid-size central city,
 - 3 = urban fringe of large city,
 - 4 = urban fringe of mid-size city,
 - 5 = large town,
 - 6 = small town,
 - 7 = rural, outside MSA, and
 - 8 = rural, inside MSA;
4. ZIP code;
5. Enrollment as reported or imputed in the 2001–02 PSS (in descending order); and
6. PIN number (a unique number assigned to identify the school on PSS).

Within each stratum, private schools in the list frame were systematically selected using a probability proportional to size algorithm. The measure of size used was the square root of the 2001–02 PSS number of teachers in the school. Any school with a measure of size larger than the sampling interval was excluded from the probability sampling process and included in the sample with certainty. All of the area frame schools identified in the 2001–02 PSS area frame within noncertainty (selected with probability less than one) PSUs that had not already been added as part of the 2003–04 PSS list frame updating operation were also selected for the sample with certainty. This produced a list frame sample of 3,443 and an area frame sample of 179 schools, totaling 3,622 schools in the SASS private school sample.

⁷ Since middle schools were not stratified explicitly into one grade level stratum, some of them were classified as elementary and some as secondary. For more information, see chapter 4 of *Documentation for the 2003–04 Schools and Staffing Survey* (Tourkin et al. 2007).

SASS Teacher Sample Selection

Selecting the teacher sample in both public and private schools involved the following steps:

- The selected schools were asked to provide teacher lists.
- From the lists, 53,188 teachers from public schools (including public charter and BIA-funded schools) and 9,947 teachers from private schools were selected.

The public and private teacher sample selections are described together because identical methodologies were used. The only differences were in the average number of teachers selected within a school, as shown on table 1.

SASS Teacher Frame

In previous SASS enumerations, sampled schools were asked to provide a list of their teachers primarily by mail. This cumulative list of teacher rosters formed the teacher sampling frame. For the 2003–04 SASS, sampled schools provided teacher rosters to field representatives during personal visits to the sampled schools. The field representatives keyed the roster information into a laptop computer and teachers were sampled from the school, sometimes during the same personal visit.

Along with the names of its teachers, sampled schools were asked to provide the following descriptive characteristics of each teacher:

- New/experienced—Teachers in their 1st, 2nd, or 3rd year of teaching during the 2003–04 school year were classified as new teachers, while those in their 4th year or more were classified as experienced.
- Teaching status (as defined by the school):
 - part time; or
 - full time.
- Race/ethnicity (as reported by the school):
 - White (non-Hispanic);
 - Black (non-Hispanic);
 - Hispanic—regardless of race;
 - Asian or Pacific Islander; or
 - American Indian or Alaska Native.
- Subject matter taught—Teachers were classified as teaching special education, general elementary, math, science, English/language arts, social studies, vocational/technical, or other.

The above information for each teacher in a selected SASS school comprised the teacher frame.

Within each sampled school, teachers were stratified into one of four teacher types in the following hierarchical order:

1. Asian or Pacific Islander;
2. American Indian or Alaska Native;
3. New (3 or fewer years in the teaching profession); and
4. Experienced (more than 3 years of teaching).

To illustrate the hierarchical ordering, if a teacher was both new and Asian, then that teacher would be classified as Asian.

Within-School SASS Teacher Allocation

The goals of the teacher sampling for SASS were to simultaneously achieve the following:

- Select a minimum of 1 and a maximum of 20 teachers per school.
- Select an average of three to eight teachers per school depending upon school level and school type as shown in table 1.
- Select at least 1,600 Asian or Pacific Islander teachers and 1,600 American Indian or Alaska Native teachers.
- Select a minimum of 2,300 new teachers per school type (public, private). For new teachers in public schools, oversampling was not required due to the large number of sampled schools with new teachers. Therefore, teachers were allocated to the new and experienced categories proportional to their numbers in the school. However, for private school teachers, new teachers were oversampled by a factor of 1.5. This factor was used to ensure that the sample size goal set per school type was met.
- Minimize the variance of teacher estimates within school stratum by attempting a self-weighting design (all teachers having the same probability of selection). This constraint was relaxed when necessary to accommodate the other goals of teacher sampling.

Table 1. Average expected number of new and experienced teachers selected per school, by school level and school type: 2003–04

School type	School level		
	Elementary	Secondary	Combined
Public (including public charter and BIA-funded ¹)	3.8	7.5	5.7
Private	3.8	4.7	2.8

¹ BIA refers to the Bureau of Indian Affairs.

NOTE: These averages do not include Asian or Pacific Islander or American Indian or Alaska Native teachers.

SOURCE: *Documentation for the 2003–04 Schools and Staffing Survey*, Schools and Staffing Survey (SASS), 2003–04, U.S. Department of Education, National Center for Education Statistics.

Before teachers were allocated to the new/experienced strata, schools were first allocated an overall number of teachers to be selected. This overall sample size was chosen so as to equalize the teacher weights within school stratum (i.e., state/school level for public schools and affiliation/school level/region for private schools). Teacher weights within stratum were not always equalized, however, due to the differential sampling for Asian or Pacific Islander and American Indian or Alaska Native teachers.

The final SASS teacher sample met all the goals presented above with one exception—the targeted number of American Indian or Alaska Native teachers selected was not met. Both the unweighted and weighted totals are given in the sample breakdown presented in table 2. The weighted totals are used in TFS weighting to calculate an adjustment factor. Chapter 8 gives the details of the TFS weighting process.

Table 2. Final unweighted and weighted number of teachers selected for the SASS teacher sample, by teacher type and school type: 2003–04

School type	Teacher type									
	Total		Experienced		New		American Indian or Alaska Native		Asian or Pacific Islander	
	Unwtd.	Wtd.	Unwtd.	Wtd.	Unwtd.	Wtd.	Unwtd.	Wtd.	Unwtd.	Wtd.
Total	63,135	3,721,994	49,263	3,049,257	10,528	617,431	1,530	11,034	1,814	44,272
Private	9,947	467,373	7,008	370,368	2,496	87,169	95	1,052	348	8,784
Public charter	1,486	41,689	970	27,552	471	13,196	8	78	37	862
Traditional public and BIA-funded ¹	51,702	3,212,932	41,285	2,651,337	7,561	517,066	1,427	9,904	1,429	34,625

¹ BIA refers to the Bureau of Indian Affairs.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2003–04.

There were 10,368 traditional public, BIA-funded, and public charter schools selected for the sample in SASS and from these schools 53,188 teachers were selected for the sample. There were 3,622 private schools sampled in SASS and from these schools 9,947 teachers were selected for the sample. About 11 percent of public schools and 16 percent of private schools that met the SASS definition of a school did not provide teacher lists. No teachers were selected from these schools.

TFS Teacher Sampling Frame, Stratification, and Allocation

TFS Teacher Sampling Frame

The 2004–05 TFS sample consisted of 7,429 teachers out of the 51,223 public and private school teachers who participated in the 2003–04 SASS. The TFS teacher sample was selected from the pool of teachers who participated in the previous year's SASS. Similar to SASS, the 2004–05 TFS sample includes teachers from the public (including public charter) and private school sectors.

The sampling frame for TFS consisted of the 51,748 public, BIA-funded, and private school teachers who completed interviews for SASS. Any SASS teacher who did not complete an interview or was otherwise found to be out of scope for SASS was not included in the TFS frame. Teachers from BIA-funded schools were included in the sampling frame, so are included in this count. This number is slightly lower than the total number of interviewed teachers in SASS (51,847) since it excludes 99 teachers who were reported to have died or left the country at the time of the teacher status collection in the fall of 2004.

As described earlier, one purpose of TFS was to measure attrition rates a year after the 2003–04 SASS data collection. In SASS, schools were selected first and then teachers were selected within the sampled schools. The TFS teachers were then selected from the SASS eligible teacher sample.

TFS Teacher Stratification

The TFS sample is a stratified sample that was allocated in order to allow comparisons of teachers by status (stayers, movers, and leavers) within school type (traditional public, public charter, and private), experience groups, school level, and minority status. For TFS, the responding 2003–04 SASS teachers were stratified by these five variables in the order shown below:

1. School type (traditional public, public charter, private school):
 - traditional public—teachers who taught in the public school system in the 2003–04 school year;
 - public charter—teachers who taught in a public charter school in the 2003–04 school year; and
 - private—teachers who taught in a private school in the 2003–04 school year.
2. Teacher status (leaver/stayer/mover/unknown)—Each SASS sampled school was mailed a questionnaire asking for current information about the previous year’s teachers. The information collected on this form was used to stratify each teacher who responded to SASS in the following categories:
 - leavers—teachers in the 2003–04 school year who left the teaching profession before the 2004–05 school year began;
 - stayers—teachers in the 2003–04 school year who remained teachers at the same school for the 2004–05 school year or teachers whose status was not reported (left blank) by the school⁸;
 - movers—teachers in the 2003–04 school year who remained teachers for the 2004–05 school year but in a different school or teachers who worked in a school in the 2003–04 school year that closed or merged with another school; and
 - unknowns—teachers whose status was reported by the school as having left, without any other information given.
3. Experience (new/experienced):
 - new—teachers who had less than 4 years of teaching experience completed at the end of the 2003–04 school year; and
 - experienced—teachers who had at least 4 years of teaching experience completed at the end of the 2003–04 school year.
4. Teacher’s grade level (elementary/middle/secondary):
 - elementary—teachers who taught elementary school students (any grade K–8, but at least one of grades K–4) in the 2003–04 school year regardless of the level of the school in which they taught;
 - middle—teachers who taught middle school students (grades 5–8 exclusively) in the 2003–04 school year regardless of the level of the school in which they taught; and
 - secondary—teachers who taught secondary school students (any grade 6–12, but at least one of grades 9–12) in the 2003–04 school year regardless of the level of the school in which they taught.
5. Minority status (minority/nonminority):
 - minority—teacher with any racial/ethnic background other than White, non-Hispanic; and
 - nonminority—any teacher who did not fall into the above category.

The characteristics defined above were used in all aspects of the TFS sampling. The results of this stratification are shown in table 3.

⁸ Teachers whose status was not reported in the Teacher Status Form (Form TFS-1) were assumed to be stayers because in any given year most teachers are stayers. These teachers account for approximately 1–2 percent of all stayers.

Table 3. TFS sampling frame counts for teachers, by school type, teacher status, teacher’s grade level, teacher experience, and minority status: 2004–05

Status, grade level, experience, and minority status of teachers	Total	School type		
		Public ¹	Public charter	Private
Total	51,748	42,624	1,176	7,948
Leavers ² (total)	4,766	3,410	247	1,109
Elementary (total)	1,614	887	93	634
New				
Minority	144	64	19	61
Nonminority	449	186	26	237
Experienced				
Minority	184	120	15	49
Nonminority	837	517	33	287
Middle (total)	981	709	41	231
New				
Minority	99	62	14	23
Nonminority	207	123	6	78
Experienced				
Minority	143	108	7	28
Nonminority	532	416	14	102
Secondary (total)	2,171	1,814	113	244
New				
Minority	144	99	13	32
Nonminority	563	431	47	85
Experienced				
Minority	240	201	14	25
Nonminority	1,224	1,083	39	102
Movers (total)	3,208	2,696	102	410
Elementary (total)	1,150	900	31	219
New				
Minority	75	57	6	12
Nonminority	340	239	12	89
Experienced				
Minority	121	105	5	11
Nonminority	614	499	8	107
Middle (total)	732	615	20	97
New				
Minority	41	36	1	4
Nonminority	201	160	5	36
Experienced				
Minority	96	83	6	7
Nonminority	394	336	8	50

See notes at end of table.

Table 3. TFS sampling frame counts for teachers, by school type, teacher status, teacher’s grade level, teacher experience, and minority status: 2004–05—Continued

Status, grade level, experience, and minority status of teachers	Total	School type		
		Public ¹	Public charter	Private
Secondary (total)	1,326	1,181	51	94
New				
Minority	84	61	14	9
Nonminority	385	324	16	45
Experienced				
Minority	132	117	9	6
Nonminority	725	679	12	34
Stayers (total)	43,774	36,518	827	6,429
Elementary (total)	14,505	10,562	394	3,549
New				
Minority	691	451	63	177
Nonminority	2,451	1,527	97	827
Experienced				
Minority	1,754	1,403	55	296
Nonminority	9,609	7,181	179	2,249
Middle (total)	8,549	7,158	137	1,254
New				
Minority	427	354	18	55
Nonminority	1,407	1,130	32	245
Experienced				
Minority	1,024	908	15	101
Nonminority	5,691	4,766	72	853
Secondary (total)	20,720	18,798	296	1,626
New				
Minority	795	681	40	74
Nonminority	3,550	3,084	78	388
Experienced				
Minority	1,981	1,826	39	116
Nonminority	14,394	13,207	139	1,048

¹ Teachers in Bureau of Indian Affairs-funded schools were included in the sampling frame as public teachers and dropped after sampling occurred.

² Teachers classified as having an unknown status are included in the leaver category in this table since most of them are found to be leavers.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Unpublished Sampling Frame,” 2004–05.

TFS Teacher Allocation

The 2004–05 TFS sample was allocated to strata to best achieve the goals of the sampling design. To accomplish this, the following rules were applied:

- Optimize the reliability of comparisons of current versus former teachers (i.e., leavers versus nonleavers) by selecting all leavers.
- Optimize the comparison of movers versus nonmovers (stayers) by selecting all private school movers.
- Optimize the reliability of comparisons of minority versus nonminority movers.

To that end, the following procedures were applied:

- Select approximately 70 percent of the traditional public and public charter minority movers.
- Select approximately 50 percent of the traditional public and public charter nonminority movers.

Since teachers with an unknown status could be movers or leavers, sample using the mover sampling rate, as follows:

- Select all private teachers with an unknown status.
- Select approximately 50 percent of traditional public and public charter teachers with an unknown status.
- Select a fixed sample size of stayers as follows in order to optimize the comparison of stayers versus movers or leavers and to increase the number of reporting categories for publication:
 - 1,760 traditional public school stayers (approximately 5 percent of the traditional public school stayers in the sampling frame);
 - 120 public charter school stayers (approximately 15 percent of the public charter school stayers in the sampling frame); and
 - 900 private school stayers (approximately 15 percent of the private school stayers in the sampling frame).

Once the sample sizes were determined at the teacher status/school type/minority status level based on these rules, the sample was allocated to strata proportional to the cumulative measure of size (SASS teacher initial basic weight) within each stratum relative to the cumulative measure of size of the teacher status/school type/minority status level. This maximized the reliability of teacher status/school type/minority status estimates.

The final TFS sample allocation is shown below. Note that the actual selected sample was the same as the allocated sample for TFS.

Table 4. Final allocated TFS sample sizes for teachers, by school type, teacher status, teacher's grade level, teacher experience, and minority status: 2004–05

Status, grade level, experience, and minority status of teachers	Total	School type		
		Traditional public ¹	Public charter	Private
Total	8,297	5,553	325	2,419
Leavers ² (total)	3,582	2,330	143	1,109
Elementary (total)	1,485	786	65	634
New				
Minority	126	54	11	61
Nonminority	411	154	20	237
Experienced				
Minority	173	115	9	49
Nonminority	775	463	25	287
Middle (total)	798	539	28	231
New				
Minority	72	40	9	23
Nonminority	187	106	3	78
Experienced				
Minority	107	73	6	28
Nonminority	432	320	10	102
Secondary (total)	1,299	1,005	50	244
New				
Minority	77	40	5	32
Nonminority	319	215	19	85
Experienced				
Minority	140	108	7	25
Nonminority	763	642	19	102
Movers (total)	1,934	1,462	62	410
Elementary (total)	950	707	24	219
New				
Minority	75	57	6	12
Nonminority	285	189	7	89
Experienced				
Minority	121	105	5	11
Nonminority	469	356	6	107
Middle (total)	534	421	16	97
New				
Minority	30	25	1	4
Nonminority	135	96	3	36
Experienced				
Minority	96	83	6	7
Nonminority	273	217	6	50

See notes at end of table.

Table 4. Final allocated TFS sample sizes for teachers, by school type, teacher status, teacher’s grade level, teacher experience, and minority status: 2004–05—Continued

Status, grade level, experience, and minority status of teachers	Total	School type		
		Traditional public ¹	Public charter	Private
Secondary (total)	450	334	22	94
New				
Minority	41	25	7	9
Nonminority	138	88	5	45
Experienced				
Minority	61	49	6	6
Nonminority	210	172	4	34
Stayers (total)	2,781	1,761	120	900
Elementary (total)	1,315	772	71	472
New				
Minority	112	68	12	32
Nonminority	437	246	18	173
Experienced				
Minority	102	68	9	25
Nonminority	664	390	32	242
Middle (total)	639	451	25	163
New				
Minority	58	45	4	9
Nonminority	206	148	6	52
Experienced				
Minority	46	36	2	8
Nonminority	329	222	13	94
Secondary (total)	827	538	24	265
New				
Minority	58	42	3	13
Nonminority	297	190	7	100
Experienced				
Minority	53	39	3	11
Nonminority	419	267	11	141

¹ Teachers in Bureau of Indian Affairs-funded schools were included in the allocation.

² Teachers classified as having an unknown status are included in the leaver category in this table since most of them are found to be leavers.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “TFS Sample File,” 2004–05.

TFS Teacher Sample Selection

Sorting

Within each TFS stratum, teachers who had completed interviews (i.e., had a final interview status recode [ISR] = 1) in the 2003–04 SASS were sorted by measure of size, subject taught, Census region, affiliation membership (private teachers only), school locale, school enrollment, and SASS teacher control number to achieve a random, balanced sample. The variables used in the sort are described below:

1. Measure of size—this is the 2003–04 SASS teacher initial basic weight (inverse of the probability of selection prior to any corrections identified during data collection).
2. Recoded teacher subject (based on SASS teacher responses)—this is the main subject that a teacher taught during the 2003–04 school year:
 - special education;
 - general elementary;
 - math;
 - science;
 - English/language arts;
 - social studies;
 - vocational/technical; or
 - other.
3. Census region—the region in which the school is located:
 - Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont);
 - Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin);
 - South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia); or
 - West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming).
4. Recoded affiliation stratum (private school teachers only, based on the SASS private school stratification)—the affiliation with which the school is associated, including:
 - Catholic—parochial;
 - Catholic—diocesan;
 - Catholic—private;
 - Amish;
 - Assembly of God;
 - Baptist;
 - Episcopal;
 - Jewish;
 - Lutheran Church—Missouri Synod;
 - Wisconsin Evangelical Lutheran Synod;
 - Mennonite;
 - Pentecostal;
 - Seventh Day Adventist;
 - other religious;

- nonsectarian—regular;
 - nonsectarian—special emphasis; or
 - nonsectarian—special education.
5. Locale based on 1990 Census geography—that is, the area in which the school is located. The categories are as follow:
- large central city;
 - mid-size central city;
 - urban fringe of large central city;
 - urban fringe of mid-size central city;
 - large town;
 - small town;
 - rural, outside MSA; and
 - rural, inside MSA.
6. School enrollment—that is, the number of students enrolled in the school during the 2003–04 school year.
7. Teacher control number—that is, the number assigned to each 2003–04 SASS sampled teacher.

Sample Selection

After the teachers were sorted using the above variables they were selected within each stratum using a systematic probability proportional to size sampling procedure. This procedure was similar to that used in the SASS school selection. Any teacher with a measure of size (SASS teacher initial basic weight) greater than the sampling interval was included in the sample with certainty (automatically included). Since TFS selection probabilities were not conditioned on anything, the selected sample sizes equaled the allocated sample size. At this point, teachers from BIA-funded schools were dropped from the TFS sample.⁹

⁹ There were 40 teachers from BIA-funded schools who were deleted from the TFS sample.

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Chapter 4. Data Collection

The U.S. Census Bureau conducted the 2004–05 Teacher Follow-up Survey (TFS) during the 2004–05 school year. TFS data collection began with teacher sampling procedures; schools were mailed a Teacher Status Form to complete by indicating the occupational or teacher status of each teacher listed on the form. If a school did not respond to the Teacher Status Form, those teachers were still eligible for sampling in TFS. Next, a sample of teachers was mailed a Questionnaire for Former Teachers or a Questionnaire for Current Teachers to complete. A portion of the sampled teachers was given the option to complete the questionnaire on the Internet. Finally, follow-up efforts were conducted to collect TFS questionnaire data from those sampled teachers who had not yet completed a questionnaire.

Overview of Data Collection Procedures

TFS data collection began as part of the sample selection operation in the fall of 2004. The Teacher Status Form was mailed to each school that had at least one teacher who participated in the 2003–04 Schools and Staffing Survey (SASS). A knowledgeable person at the school (e.g., a school administrator, a member of the office staff) was asked to complete the Teacher Status Form by indicating the current teaching or other occupational status of each teacher listed on the form. The sample for TFS was selected based on the status of teachers obtained in the Teacher Status Form operation.¹⁰ For additional information about the sample selection procedures for TFS, see chapter 3.

Because paper questionnaires were the primary data collection method for the 2004–05 TFS, valid addresses were needed to distribute the questionnaires to respondents. The addresses that typically were used were home addresses that the respondent provided on the 2003–04 SASS teacher questionnaire. However, because some respondents did not provide a home address on SASS, Census Bureau clerical staff conducted an initial address research operation in order to obtain a valid home mailing address so that the questionnaires could be distributed. A similar operation was used for cases that were returned by the post office as “undeliverable as addressed.”

In January 2005, as part of an experiment on response rates for mailed vs. internet questionnaires, approximately one-third of the selected teachers were mailed paper questionnaires. The remaining respondents were offered the option to complete the questionnaire on the Internet and were mailed a letter that included the user name and password that they could use to access the survey on the Internet. At the end of January, these internet respondents were also mailed paper questionnaires. The internet option was offered in the context of an experiment that included providing monetary incentives to roughly half of the respondents in order to increase response rates, specifically internet responses. With increased response rates, the number of cases sent to field for follow-up would be reduced.

After the initial and follow-up mailing of questionnaires, approximately 58 percent of respondents had not completed the TFS questionnaire on paper or on the Internet. Census Bureau field staff was responsible for completing data collection for these cases. As fieldwork progressed, 6 percent of the questionnaires in the initial field workload were mailed in late by respondents who had completed them on their own before field staff had a chance to contact them. These cases were removed from the field staff workload. Field staff contacted all nonrespondents, and this resulted in a 70 percent response rate for cases assigned to field. Supervisors at 12 Regional Offices coordinated the field staff’s work. Regional Office staff was responsible for making assignments, supervising fieldwork, and sending completed questionnaires to the processing staff.

¹⁰ The focus primarily was to distinguish between teachers still teaching at the same school as in the 2003–04 school year, teachers who moved to new schools, and teachers no longer teaching in grades pre-K–12.

The Census Bureau processing staff in Jeffersonville, Indiana, was responsible for checking-in completed questionnaires, capturing data, and implementing quality control procedures.

An overview of the purpose and content of each TFS questionnaire is discussed in chapter 1. The preparation for the 2004–05 TFS is described in chapter 2.

Internet and Incentive Experiment

The goal of the 2004–05 TFS internet and incentive experiment was to use monetary incentives to increase overall response rates and responses via the Internet, when both mail and internet choices were offered. The current and former teachers who were selected to be in the TFS sample were randomly divided into six different treatment groups. The groups varied on three dimensions, which included offering an internet option, offering a prepaid \$10 incentive, and notifying respondents in the internet groups that they also would receive a paper questionnaire.

There was an initial group of movers and leavers who did not provide a home address on the 2003–04 SASS and therefore could not be mailed a TFS questionnaire. Then, as TFS operations progressed, additional cases were returned to clerical processing staff with inaccurate or unreachable addresses. These cases were all sent to address research operations and were removed from the internet and incentive experiment. For more information about this operation, see the “Address Research Operations” section of this chapter. The resulting sample sizes for the TFS internet and incentive experiment can be found in table 5.

Groups 1 and 2 were sent only paper questionnaires throughout the duration of the experiment. Group 1 was given a \$10 incentive card with the first mailing of TFS materials, and group 2 was not given any sort of incentive. Groups 1 and 2 were included in the experiment so that Census Bureau analysts could evaluate the impact of the incentive on mail-only questionnaires.

Groups 3 through 6 initially were given the internet option and shortly afterwards were given the paper option as well. However, groups 3 and 4 were not made aware that they would receive a paper version of the TFS a week later, while groups 5 and 6 were told of the forthcoming paper questionnaire in the initial letters they received requesting their participation. Finally, the four internet groups were further broken down into incentive panels. Groups 3 and 5 were given a \$10 incentive card with the first mailing of TFS materials. The remaining groups were not offered any kind of monetary incentive. Table 5 below gives the characteristics of the six treatment groups.

Table 5. Treatment groups, by distribution mode, incentive offered, and sample size: 2004–05

Group and distribution mode	Incentive offered	Sample size
1: No Internet	Yes	1,074
2: No Internet	No	1,147
3: Internet, without mention of mailout 1 week later	Yes	1,096
4: Internet, without mention of mailout 1 week later	No	1,100
5: Internet, with mention of mailout 1 week later	Yes	1,067
6: Internet, with mention of mailout 1 week later	No	1,131

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

At the beginning of the experiment, all teachers were mailed either a letter offering the internet option (groups 3–6) or a letter and questionnaire at the same time (groups 1–2). The \$10 incentive card was included in this mailing for groups 1, 3, and 5. The incentive card was a prepaid \$10 American Express

gift card that could be used wherever it was accepted. The cards expired approximately 6 months from when they were received by the sampled teachers. Respondents who received the incentive were given an 800-number to call if they had any problems using the card. Respondents offered the internet reporting option were given an 800-number as well as an e-mail address to assist with any questions or problems they encountered.

Key findings from the 2004–05 TFS internet and incentive experiment can be summarized as follows:

- The best response to TFS was achieved by offering only the mailed paper questionnaires.
- While adding an internet option negatively impacted the total number of responses, the negative effect was offset by not mentioning the forthcoming mail option.
- Offering a small, prepaid incentive increased responses by 5.5 percent, which is statistically significant ($p < .05$).

For a detailed description of the background, methodology, and results of the TFS internet and incentive experiment, refer to “Appendix E. (Inter) Net Gain? Experiments to Increase Response.”

Timing of Data Collection

Data collection for the 2004–05 TFS began in October 2004 and continued through June 2005. Table 6 summarizes the specific data collection activities and the time frame in which each occurred.

Table 6. Data collection time schedule: 2004–05

Activity	Date of activity
Teacher Status Forms and letters mailed to sampled schools	Oct. 2004
Reminder postcards for the Teacher Status Form mailed to sampled schools	Oct. 2004
Nonresponse follow-up of schools that did not return the Teacher Status Form	Nov. 2004
Address research operation (before mailout)	Jan. 2005
Initial mailing of paper current and former teacher questionnaires to non-internet groups; initial mailing of letter containing user name and password to access survey on the Internet to internet groups	Jan. 2005
Mailing of current and former teacher questionnaire reminder postcards to non-internet groups	Jan. 2005
Initial mailing of paper current and former teacher questionnaires to internet groups	Jan. 2005
Initial mailing of current and former teacher questionnaires to address research cases	Feb. 2005
E-mail reminders sent to respondents with valid e-mail addresses from the Teacher Status Form	Feb. 2005
Telephone and personal visit follow-up for cases with no success in the address research operation	Feb.–Mar. 2005
“Undeliverable as addressed” address research operation	Feb.–Mar. 2005
Second mailing of current and former teacher questionnaires to both internet and non-internet groups	Mar. 2005
Mailing of current and former teacher questionnaires to “undeliverable as addressed” address research cases	Mar. 2005
Telephone and personal visit follow-up of current and former teacher questionnaire nonrespondents	Apr.–Jun. 2005

SOURCE: *Documentation for the 2003–04 Teacher Follow-up Survey*, Teacher Follow-up Survey (TFS), 2004–05, U.S. Department of Education, National Center for Education Statistics.

Data Collection Procedures

Collecting Teacher Status Information

In October 2004, the Census Bureau's clerical processing staff mailed the Teacher Status Form to sampled schools that provided lists of teachers during the 2003–04 SASS. The schools were asked to complete the form by indicating whether each teacher listed was still teaching in that school (stayer), was teaching in another school (mover), or had left the position of a K–12 teacher (leaver). The status of the teacher was needed to select the sample for TFS. The Teacher Status Form also requested an e-mail address for each current or former teacher listed; reminders were sent to these addresses later in the data collection phase.

One week after the Teacher Status Form mailing, reminder postcards were sent to the sampled schools. After the Teacher Status Forms and reminder postcards were distributed to schools, approximately 49 percent of schools had not completed a Teacher Status Form. Census Bureau clerical staff was responsible for the nonresponse follow-up of these cases. Nonresponse efforts consisted of staff following a script to make telephone calls to the schools in order to obtain teacher status information. Staff documented each call attempt by entering an outcome code in a call record; this outcome code indicated what had happened during each follow-up attempt (e.g., a complete interview was collected, a partial interview was collected, the school refused to participate, etc.). A handful of nonresponse cases were Amish schools that did not have telephone numbers and, therefore, could not be contacted by clerical staff during nonresponse follow-up. Census Bureau staff conducted the follow-up with personal visits for these cases. Of the 28 cases assigned to staff, 25 interviews were completed. The final response rate for the Teacher Status Form operation was 99 percent. For further information about the Teacher Status Form operation and TFS sample selection procedures refer to chapter 3.

Initial Mailings of Questionnaires to Current and Former Teachers

In January 2005, the first mailing of questionnaires took place. All teachers were mailed a version of the TFS introductory letter that explained the purpose of the survey and included a statement of authority and assurance of confidentiality. Each of the six treatment groups had its own version of the letter. The respondents in the internet groups (groups 3–6) were provided a user name and password to use to access the survey on the Internet in this initial letter. The respondents in the non-internet groups (groups 1–2) received paper versions of either the Questionnaire for Former Teachers or the Questionnaire for Current Teachers with the letter. Finally, the respondents in the incentive groups (groups 1, 3, and 5) received their \$10 incentive card with the letter.

The non-internet groups were mailed a reminder postcard approximately 10 days after the first mailing in January 2005. At the same time, the internet groups were mailed the paper current or former teacher questionnaires and were reminded about the internet option. In February 2005, e-mail reminders were sent to respondents whose e-mail addresses were provided on the Teacher Status Form. The e-mail reminders sent to respondents in the internet groups included a link to the TFS questionnaire website.

The Questionnaire for Former Teachers was sent to sampled persons who were reported by school administrators as having left the K–12 teaching profession at the home address that was provided in the 2003–04 SASS teacher questionnaire. The Questionnaire for Current Teachers was sent to sampled persons who were reported as still teaching at the elementary or secondary level, either in the same school as the previous year (stayers) or in a different school (movers). Questionnaires were sent to the stayers' home address when one was provided on SASS. Otherwise, they were sent to the stayers' school address.

Current teacher questionnaires were sent to the movers' home address that was provided on SASS, if one was provided.

Address Research Operations

Movers and leavers who did not provide a home address on the 2003–04 SASS could not be mailed a questionnaire. Therefore, in January 2005, clerical staff began an address research operation. Staff began the operation by calling the sampled teacher's contact person(s). On the 2003–04 SASS teacher questionnaires, teachers were asked to provide the address and telephone number of two people who would know how to get in touch with them during the coming years. If the sampled teacher did not provide a contact person(s) on SASS, or the contact person(s) was not helpful, staff called the former school and used online databases to try to obtain new contact information for the sampled person. This included a new home address, work address, and/or telephone numbers at both. If a new address of some sort was found, the questionnaire was sent to the new address in February 2005 to be completed by the sampled teacher. If no new address was found, the questionnaire was labeled with his or her former school address and sent to one of the 12 Regional Offices¹¹ to be assigned to field staff. Investigative follow-up for these cases took place throughout February and March 2005. Staff contacted the schools where the teachers worked the year before to try to obtain location information. All cases included in the address research operation were removed from the incentive experiment because data collection began later for this group, making the collection process incomparable to cases included in the incentive experiment.

Throughout February and March 2005 and after the first mailing, cases that were returned to the Census Bureau's clerical processing center as "undeliverable as addressed" by the post office were sent to clerical staff for address research. If a new address was found, the questionnaire was sent to the new address in March 2005 to be completed by the sampled teacher. If no new address was found, the questionnaire was addressed to the teacher at his or her former school and sent to one of the 12 Regional Offices to be assigned to field staff with the nonresponse cases. These cases were removed from the TFS incentive experiment analysis.

Follow-up Mailings

In March 2005, approximately 6 weeks after the first mailing, each sampled person who had not completed a TFS questionnaire, either on the paper form initially mailed to them or on the Internet, was mailed a second questionnaire. The internet groups were once again reminded about the internet option.

"Switchers"

Throughout the data collection period, many respondents returned the questionnaire they received indicating that it did not apply to them. This happened when the sample teacher's 2003–04 school incorrectly reported the sample teacher's current teaching status on the Teacher Status Form. These cases were referred to as "switcher" cases. For example, if sampled teacher A's 2003–04 school reported her as leaving the teaching profession, she was categorized as a "leaver" and mailed a Questionnaire for Former Teachers. However, it may have been the case that this teacher left her previous (2003–04) school and was working as a teacher elsewhere. This would make her a "mover," meaning that she was currently teaching and should complete the Questionnaire for Current Teachers rather than the Questionnaire for Former Teachers that she was mailed originally. Teacher A is called a "switcher."

¹¹ The Census Bureau has Regional Offices in Atlanta, Boston, Charlotte, Chicago, Dallas, Denver, Detroit, Kansas City, Los Angeles, New York, Philadelphia, and Seattle.

In the case of switchers, the sampled teacher, Teacher A, was instructed to return the incorrect form that she received (in this case, a Questionnaire for Former Teachers) to clerical processing staff who would then send her the correct form (a Questionnaire for Current Teachers) for completion. Among TFS cases, 4.6 percent were switchers.

The internet version contained both versions of TFS. Respondents' answers to the initial screening questions determined if they followed the former or current teacher questionnaire path. In addition, the internet instrument automated skip patterns and presented the appropriate questions based on the respondent's answers.

Nonresponse Follow-up

Follow-up efforts began in April 2005. Cases were included in nonresponse follow-up when the sampled teachers had not returned a completed paper questionnaire or completed the questionnaire on the Internet. The majority of the nonresponse cases had valid telephone numbers and home addresses, so field staff contacted teachers by telephone and personal visit to complete the TFS interview. For the remaining cases, nonresponse efforts consisted of telephone calls to all sources of information available—contact persons from SASS, information found during the address research operation, and the prior year's school—in order to obtain information about the person's current home address or employer. If at least four attempts were made by telephone and no contact was established or there was no valid telephone number or no way to obtain a valid one, personal visits were permitted. Field staff members were instructed to visit the former schools and attempt to obtain information to locate the sampled persons.

Field staff members were supplied with a preprinted labeled questionnaire for each nonresponse case. The questionnaires were labeled with any and all available information, including home address, former or current school address, contact information, and any information that was obtained during the address research operations, where applicable. In addition, they were instructed to have blank former and current teacher questionnaires on hand at all times in case they encountered "switcher cases" that required the other type of questionnaire.

After the field staff member completed a follow-up action (e.g., conducted an interview, picked up a completed questionnaire, left a message, verified that the questionnaire had been mailed), he or she indicated what had occurred by entering an outcome code and notes into the TFS Excel spreadsheet, which kept track of the status of all TFS nonresponse follow-up cases. The Regional Offices mailed all completed questionnaires to the clerical processing staff weekly. Progress reports for the nonresponse cases were run twice weekly. Final response rates are presented in detail in chapter 5.

Information about questionnaire check-in, data capture methods used to convert data from paper to electronic format, and criteria for determining final response rates can be found in chapter 6.

Changes in Data Collection Methods from the 2000–01 TFS

A number of new data collection methods were implemented in the 2004–05 administration of TFS. These methods included a series of address research operations, an internet reporting option, the offering of monetary incentives to respondents, and the use of e-mail reminders to respondents. Each of these methods was employed with the ultimate goal of increasing overall response to TFS.

Address Research Operation

In the 2000–01 TFS, all cases without addresses were sent directly to field staff, who called the contacts provided by the teachers in SASS (if they were provided) or the teachers' former schools. The 2004–05 TFS conducted a centralized research operation for these cases, which included researching addresses in an extensive U.S. address database, in addition to calling the contacts that the sampled teacher provided on the 2003–04 SASS teacher questionnaire and the sampled teacher's 2003–04 school.

Internet and Incentives

The 2000–01 TFS questionnaires were distributed and data were collected by mail only. However, for the 2004–05 TFS, an internet reporting option was implemented for two-thirds of the respondents. Census Bureau analysts and the National Center for Education Statistics (NCES) wanted to encourage responses on the Internet because internet questionnaires can reduce nonsampling error due to the automated skip patterns, edits, and range checks that are embedded in internet questionnaires. Additionally, internet questionnaires can provide data processing advantages such as faster turnaround times and lower processing costs.

While one of the most important goals of TFS was to maximize the overall response rates, simply offering an internet reporting option typically does not increase total response rates for mailed questionnaires.¹² Census Bureau analysts and NCES wanted to implement an additional data collection method that would increase internet response (in addition to mail response). Consequently, a \$10 monetary incentive was offered to approximately half of the TFS respondents. By offering an internet option as well as a monetary incentive, analysts hoped that the overall response rate would be higher than it would be if these methods were not employed. This was tested in the 2004–05 internet and incentive experiment, which is described further in “Appendix E. (Inter) Net Gain? Experiments to Increase Response.”

E-mail Reminders

The Teacher Status Forms that were mailed to schools requested an e-mail address, in addition to teaching or other occupational status, for each of the teachers listed. Later during data collection, respondents for whom an e-mail address had been collected were sent an e-mail reminder. These e-mail reminders were sent prior to the second questionnaire mailings and served as a way of reminding sampled teachers that they should complete the appropriate TFS questionnaire. In addition, the reminders e-mailed to respondents who received the internet reporting option contained a link directly to the internet survey, making it easy for respondents to get to the survey. Census Bureau analysts and NCES hoped that reminding respondents of TFS using another mode of communication (i.e., e-mail) would help to increase the self-administered response on the survey.

¹² Several studies have obtained this result. See “Appendix E. (Inter) Net Gain? Experiments to Increase Response.”

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Chapter 5. Response Rates

This chapter presents the overall survey, or unit, and item response rates for the 2004–05 Teacher Follow-up Survey (TFS). The unit response rates for each TFS survey are presented in detail, and the item response rates for both the Questionnaire for Former Teachers and the Questionnaire for Current Teachers are summarized. Nonresponse bias analyses were conducted on both the unit (i.e., type of TFS questionnaire, meaning the current teacher or former teacher questionnaire) and the individual items for TFS. These analyses are described and the major findings are presented following the response rate sections.

Survey Response Rates

Sampled cases fall into one of three categories: a completed interview, a noninterview, or out of scope. A completed interview means that a sampled teacher who met the criteria for inclusion¹³ in TFS substantially completed¹⁴ the appropriate TFS questionnaire (i.e., the former teacher questionnaire or the current teacher questionnaire). Noninterviews refer to sampled teachers who met the criteria for inclusion in TFS, but did not complete the questionnaire. Out-of-scope cases were deemed ineligible to participate in TFS and were not included in the TFS sample. SASS respondents were designated as out of scope if they moved out of the United States following the 2003–04 school year, were deceased, or had never been teachers (i.e., incorrectly reported their teaching status in the 2003–04 Schools and Staffing Survey [SASS]).

A unit response rate is the rate at which the sampled units responded by sufficiently completing the questionnaire. Unit response rates can be calculated as unweighted or weighted. The unweighted response rates are the number of interviewed cases divided by the number of eligible sampled units (i.e., including interviews and noninterviews, but not out-of-scope cases). The weighted response rates are the base-weighted (initial basic weight multiplied by the sampling adjustment factor) number of interviewed cases divided by the base-weighted number of eligible cases. The initial base weight for each sampled unit is the inverse of the probability of selection. For further discussion of the weighting procedures followed for the 2004–05 TFS, see chapter 8.

Tables 7 and 8 summarize the weighted and unweighted response rates for cases in the 2004–05 TFS by data file and by the sector of the teacher’s base-year school (i.e., public or private). The response rate tables are useful as indicators for possible nonresponse bias. The unweighted response rates provide an indication of the general success of the data collection efforts, while the weighted response rates provide measures of the quality of the data and the potential for nonresponse bias.

The weighted unit response rate for all teachers in the 2004–05 TFS was 91.82 percent.¹⁵ Table 7 summarizes the weighted and unweighted response rates for cases in the 2004–05 TFS by data file (i.e., current and former teachers) and by the sector of the teacher’s base-year school (i.e., public or private). The response rate for current teachers (shown in tables 7 and 8) includes teachers who stayed in the same school for the 2004–05 school year (stayers) and those who moved to a new school (movers). Both stayers and movers completed the current teacher questionnaire. The weighted response rate for movers

¹³ Sampled teachers met the criteria for inclusion in the TFS if they completed a 2003–04 Schools and Staffing Survey teacher questionnaire and were living in the United States.

¹⁴ To be classified as a completed interview, the respondent had to answer three required questions on the Former Teacher Questionnaire and four required questions on the Current Teacher Questionnaire and at least 10 percent of the remaining questionnaire items. (See the “Final Interview Status Edit” section in chapter 6 for more details.)

¹⁵ For the formula to calculate the unit response rate, see Standard 1-3 in the *NCES Statistical Standards* (Seastrom 2003).

(90.91 percent) was lower than the weighted response rate for stayers (92.11 percent), reducing the response rate for current teachers to 92.03 percent. The response rate for former teachers who completed the former teacher questionnaire was slightly lower at 89.64 percent.

Table 7. Unweighted and base-weighted response rates (in percent) of sampled teachers, by sector and teaching status: 2004–05

Sector and teaching status	Unweighted response rate	Base-weighted response rate
Total	91.02	91.82
Current teachers	92.17	92.03
Former teachers	89.95	89.64
Public ¹	92.03	91.90
Current teachers	92.49	92.06
Former teachers	91.16	90.25
Private	88.33	91.14
Current teachers	90.96	91.86
Former teachers	84.56	86.58

¹ The public sector includes teachers from traditional public and public charter schools.

NOTE: Weighted response rates use the inverse of the probability of selection and the sampling adjustment factor.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

The overall response rate represents the response rate to the survey taking into consideration each stage of data collection. For a teacher to be eligible for TFS, it was necessary to have received the Teacher Listing Form from the school during the 2003–04 SASS data collection, which provided a sampling frame for teachers at that school, and for the teacher to have responded to the SASS teacher questionnaire. This overall response rate is the product of the survey response rates shown in table 8: (SASS Teacher Listing Form response rate) x (SASS teacher questionnaire response rate) x (TFS questionnaire response rate).

Table 8. Base-weighted response rates (in percent) for SASS teacher data files and TFS data files, by sector: 2003–04 and 2004–05

Sector	Base-weighted 2003–04 SASS Teacher Listing Form response rate	Base-weighted 2003–04 SASS teacher data file response rate	Base-weighted 2004–05 TFS response rate		Overall 2004–05 TFS response rates	
			Current teachers	Former teachers	Current teachers	Former teachers
Total	88.27	84.55	92.03	89.64	68.68	66.90
Public ¹	89.20	84.90	92.06	90.25	69.72	68.35
Private	85.40	82.40	91.86	86.58	64.64	60.92

¹ The public sector includes teachers from traditional public and public charter schools.

NOTE: Base-weighted response rates use the inverse of the probability of selection and the sampling adjustment factor.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public and Private School Teacher Documentation Data Files,” 2003–04; Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Item Response Rates

Item response rates indicate the percentage of respondents that answered a given survey question, or item. The weighted TFS item response rates are produced by dividing the number of sampled teachers who responded to an item by the number of sampled teachers who were eligible to answer that item, adjusting by the final weight. For all TFS items, a counted response is any item that is not missing and that has a value of “0” for the associated imputation flag. For detailed information on imputations performed on TFS datasets, see chapter 7.

The weighted item response rates for the former teacher questionnaire ranged from 41 percent to 100 percent. The weighted item response rates for the current teacher questionnaire ranged from 63 percent to 100 percent. Table 9 provides a brief summary of the item response rates for both questionnaires. The item response rates in these tables are weighted and do not reflect additional response loss due to respondents’ refusal to participate in the survey.

Table 9. Summary of weighted item response rates for the Teacher Follow-up Survey, by questionnaire: 2004–05

Questionnaire	Range of item response rates (percent)	Percentage of items with a response rate of 85 percent or more	Percentage of items with a response rate of 70.0–84.9 percent	Percentage of items with a response rate of less than 70 percent
Questionnaire for Former Teachers	40.81–100.00	94.00	2.00	4.00
Questionnaire for Current Teachers	63.00–100.00	95.85	3.55	0.60

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

On the former teacher questionnaire, there were six items that had a weighted response rate of less than 85 percent. On the current teacher questionnaire, there were seven items that had a weighted response rate of less than 85 percent. These items are described in exhibit 1.

Exhibit 1. Items with weighted response rates of less than 85 percent, by questionnaire: 2004–05

Questionnaire	Item
Questionnaire for Former Teachers	7 (How much)
	26
	26 Yes (1 or 2)
	31
	35
	35 (Other)
Questionnaire for Current Teachers	3
	5 (Main assignment)
	4a
	15
	20 (ZIP code)
	20 (School district)
	44

NOTE: Numbers in this exhibit refer to questionnaire item numbers, while letters or parenthetical descriptions refer to subitems. SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Nonresponse Bias Analysis

A comprehensive nonresponse bias analysis was conducted for the 2004–05 TFS. The analysis evaluated the extent of potential bias introduced by teacher nonresponse at both unit and item levels.

Unit-level Nonresponse

Overview of Methodology

The first step in conducting the bias analysis was to examine the overall response rate by the reporting characteristics (i.e., urbanicity, school level, teacher status, teaching experience, and race/ethnicity). If the response rate fell below 50 percent, that population would not be reported separately in a published table; instead, the data would be replaced with a double dagger, although the estimates would be included in the total. The footnote would read, “Reporting standards not met. The base-weighted unit response rate was below 50 percent.” For any characteristic where the response rate was less than 85 percent, a more detailed analysis was done on the characteristics used in stratification. The results were highlighted if that particular cell had a significantly higher or lower response rate than the file as a whole and bolded if the difference was noteworthy. A noteworthy difference had to meet the following conditions:

- The difference relative to the overall response rate, or frame proportion, was greater than 10 percent.
- The absolute difference was greater than one percentage point.
- The coefficient of variation was less than 15 percent.
- The cell had at least 30 interviews.

In addition, the base-weighted distribution of the respondents was compared to the distribution on the frame, which was adjusted for sampled units identified as out of scope. As discussed above, significant differences were highlighted and noteworthy cells were bolded.

Comparing the overall response rate of each file to the tabulation cells helped to identify areas of potential concern. Comparing the base-weighted distribution of the respondents to the adjusted frame helped to identify areas of potential bias for data items that were not particularly well correlated with the weighting cells.

Summary of Conclusions. Evidence of substantial bias was not found on the data files.

Summary for TFS Teachers

The overall response rate for the teachers was 91.8 percent. The more detailed analysis was performed by the primary reporting characteristics (i.e., urbanicity, teacher’s grade level, school type, teaching experience, teacher status, school size, percent minority enrollment, teacher’s age, teacher’s race/ethnicity, and region). The overall response rate for Hispanic teachers was below 85 percent. No other group had a noteworthy response rate below 85 percent. The response rate breakdown is listed in table 10.

Table 10. Number of teachers in sample and base-weighted unit response rates, by selected reporting characteristics: 2004–05

Reporting characteristic	Number of eligible teachers	Response rate (percent)	Standard error (percent)	<i>t</i> statistic
Total	8,168	91.8	0.55	†
All teachers in sample				
Urbanicity				
Central city	2,495	91.4	1.15	-0.3054
Suburban	3,794	90.9	0.88	-0.9297
Rural	1,879	94.5	1.00	2.3600
Teacher's grade level				
Elementary	3,681	92.1	0.82	0.3069
Middle	1,941	92.2	1.21	0.2993
Secondary	2,546	91.0	1.15	-0.6292
School type				
Traditional public	5,463	91.9	0.66	0.0872
Public charter	321	92.7	2.37	0.3472
Private	2,384	91.1	2.04	-0.3191
Teaching experience				
New	3,024	91.0	0.90	-0.7744
Experienced	5,144	92.1	0.70	0.2652
Teacher status				
Leaver	1,588	93.0	1.37	0.7839
Mover	1,903	91.5	1.17	-0.2276
Stayer	2,771	92.0	0.66	0.2021
Unknown	1,906	89.0	1.62	-1.6342
School size				
Less than 200	1,699	91.8	2.73	-0.0192
200–349	1,299	93.1	1.41	0.8666
350–499	1,347	91.9	1.68	0.0488
500–749	1,490	91.9	1.09	0.0449
750 or more	2,333	91.3	0.96	-0.5090
Percent minority enrollment				
Less than 10 percent	2,678	91.8	1.07	-0.0127
10–34 percent	2,315	93.1	1.25	0.9638
35 percent or more	3,175	90.9	0.90	-0.8666
Teacher's age				
Less than 30	1,938	89.7	1.68	-1.1836
30–39	1,944	90.7	1.31	-0.7913
40–49	1,619	93.4	0.96	1.4428
50–64	2,511	92.5	0.98	0.5724
65 or more	156	92.1	4.14	0.0673

See notes at end of table.

Table 10. Number of teachers in sample and base-weighted unit response rates, by selected reporting characteristics: 2004–05—Continued

Reporting characteristic	Number of eligible teachers	Response rate (percent)	Standard error (percent)	<i>t</i> statistic
All teachers in sample—Continued				
Teacher's race/ethnicity				
Hispanic, any race	395	82.8	3.27	-2.7216
Asian or Pacific Islander, non-Hispanic	259	90.7	3.66	-0.3005
Black, non-Hispanic	657	90.6	2.31	-0.5221
More than one race, non-Hispanic	76	97.9	1.23	4.4928
American Indian or Alaska Native, non-Hispanic	110	92.5	6.86	0.0988
White, non-Hispanic	6,671	92.4	0.63	0.6430
Region				
Northeast	1,465	86.1	1.72	-3.1513
Midwest	1,944	95.2	0.90	3.2268
South	2,976	93.2	0.92	1.2550
West	1,783	90.6	1.38	-0.8419
Teachers in sample of Hispanic ethnicity, any race				
Overall	395	82.8	3.27	-2.7216
Teacher's grade level				
Elementary	198	85.6	4.05	0.5335
Middle	86	87.1	6.54	0.5931
Secondary	111	71.2	10.17	-1.0852
School type				
Traditional public	239	82.9	3.79	0.0162
Public charter	35	93.3	5.22	1.6984
Private	121	79.5	6.15	-0.4710
Teaching experience				
New	175	85.1	4.29	0.4279
Experienced	220	81.9	4.45	-0.1673
Teacher status				
Leaver	53	95.8	2.53	3.1370
Mover	90	77.5	7.95	-0.6124
Stayer	127	82.4	4.07	-0.0844
Unknown	125	88.1	3.22	1.1631
Minority status				
Minority	392	82.7	3.28	-0.0170
Nonminority	3	98.0	31.26	0.4828

† Not applicable.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File" and "Former Teacher Data File," 2004–05.

The frame distribution was compared to the base-weighted respondent distribution for the stratification characteristics (i.e., urbanicity, teacher's grade level, school type, teaching experience, teacher status, school size, percent minority enrollment, teacher's age, teacher's race/ethnicity, and region). Since the Hispanic response rate was below 85 percent, the distributions were compared for Hispanic teachers broken down by stratification characteristics. The results are as listed in table 11.

Table 11. Base-weighted frame distribution of TFS teachers, interviewed distribution, and *t* statistic, by selected reporting characteristics: 2004–05

Reporting characteristic	Frame distribution (adjusted for out-of-scope teachers) and standard error		Interviewed distribution (adjusted for out-of-scope teachers) and standard error		<i>t</i> statistic (frame proportion compared to interviewed proportion)
	Proportion	Standard error	Proportion	Standard error	
Overall	1.0000	0.0137	1.0000	0.0237	0.0000
All teachers in sample					
Urbanicity					
Central city	0.2732	0.0046	0.2677	0.0107	-0.4759
Suburban	0.5038	0.0085	0.5040	0.0166	0.0139
Rural	0.2231	0.0111	0.2283	0.0128	0.3096
Teacher's grade level					
Elementary	0.4542	0.0172	0.4556	0.0226	0.0494
Middle	0.2494	0.0064	0.2512	0.0115	0.1378
Secondary	0.2964	0.0045	0.2932	0.0128	-0.2377
School type					
Traditional public	0.8780	0.0300	0.8788	0.0342	0.0172
Public charter	0.0108	0.0005	0.0109	0.0009	0.0883
Private	0.1112	0.0391	0.1103	0.0343	-0.0169
Teaching experience					
New	0.2236	0.0059	0.2218	0.0086	-0.1665
Experienced	0.7764	0.0111	0.7782	0.0212	0.0730
Teacher status					
Leaver	0.0277	0.0014	0.0281	0.0013	0.2169
Mover	0.0648	0.0032	0.0646	0.0034	-0.0274
Stayer	0.8499	0.0103	0.8513	0.0227	0.0599
Unknown	0.0577	0.0078	0.0559	0.0086	-0.1525
School size					
Less than 200	0.0895	0.0313	0.0827	0.0270	-0.1640
200–349	0.1363	0.0039	0.1347	0.0072	-0.1940
350–499	0.1796	0.0074	0.1916	0.0112	0.8962
500–749	0.2414	0.0088	0.2382	0.0139	-0.1916
750 or more	0.3532	0.0102	0.3527	0.0163	-0.0254
Percent minority enrollment					
Less than 10 percent	0.3117	0.0204	0.3321	0.0224	0.6734
10–34 percent	0.2850	0.0074	0.2796	0.0114	-0.3998
35 percent or more	0.4033	0.0111	0.3884	0.0170	-0.7338
Teacher's age					
Less than 30	0.1590	0.0049	0.1612	0.0087	0.2217
30–39	0.2453	0.0039	0.2385	0.0114	-0.5637
40–49	0.2420	0.0052	0.2527	0.0145	0.6935
50–64	0.3429	0.0115	0.3349	0.0138	-0.4424
65 or more	0.0108	0.0020	0.0127	0.0022	0.6196

See notes at end of table.

Table 11. Base-weighted frame distribution of TFS teachers, interviewed distribution, and *t* statistic, by selected reporting characteristics: 2004–05—Continued

Reporting characteristic	Frame distribution (adjusted for out-of-scope teachers) and standard error		Interviewed distribution (adjusted for out-of-scope teachers) and standard error		<i>t</i> statistic (frame proportion compared to interviewed proportion)
	Proportion	Standard error	Proportion	Standard error	
All teachers in sample—Continued					
Teacher's race/ethnicity					
Hispanic, any race	0.0536	0.0033	0.0412	0.0042	-2.3260
Asian or Pacific Islander, non-Hispanic	0.0150	0.0007	0.0192	0.0031	1.3068
Black, non-Hispanic	0.0704	0.0028	0.0688	0.0054	-0.2563
More than one race, non-Hispanic	0.0075	0.0010	0.0099	0.0023	0.9808
American Indian or Alaska Native, non-Hispanic	0.0054	0.0008	0.0087	0.0020	1.5317
White, non-Hispanic	0.8480	0.0142	0.8521	0.0239	0.1448
Region					
Northeast	0.1942	0.0032	0.1839	0.0109	-0.9011
Midwest	0.2440	0.0047	0.2533	0.0114	0.7567
South	0.3802	0.0116	0.3843	0.0157	0.2097
West	0.1816	0.0041	0.1785	0.0091	-0.3147
Teachers in sample of Hispanic ethnicity, any race					
Overall	1.0000	0.0610	1.0000	0.1022	0.0000
Teacher's grade level					
Elementary	0.5544	0.0538	0.6241	0.0933	0.6471
Middle	0.1953	0.0226	0.1926	0.0441	-0.0548
Secondary	0.2503	0.0136	0.1833	0.0451	-1.4229
School type					
Traditional public	0.8942	0.0617	0.8871	0.1040	-0.0591
Public charter	0.0181	0.0025	0.0247	0.0053	1.1105
Private	0.0876	0.0155	0.0882	0.0156	0.0265
Teaching experience					
New	0.2814	0.0234	0.2939	0.0348	0.2986
Experienced	0.7186	0.0494	0.7061	0.0943	-0.1177
Teacher status					
Leaver	0.0124	0.0027	0.0169	0.0038	0.9636
Mover	0.0546	0.0077	0.0579	0.0092	0.2725
Stayer	0.8534	0.0566	0.8252	0.0980	-0.2492
Unknown	0.0795	0.0107	0.1000	0.0145	1.1355
Minority status					
Minority	0.9953	0.0604	0.9939	0.1016	-0.0118
Nonminority	0.0047	0.0027	0.0061	0.0054	0.2304

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Data File" and "Former Teacher Data File," 2004–05.

Conclusion/Course of Action. Based on this analysis, evidence of substantial bias was not found.

Item Nonresponse Bias Analysis

Overview of Methodology

The item bias analysis examined the overall response rate for each item on both TFS data files. The analysis included examining the item response rates by the reporting characteristics (i.e., urbanicity, teacher’s grade level, school type, school size, percent minority enrollment, teacher status, teaching experience, teacher’s age, teacher’s race/ethnicity, and region) using the final weight for all in-scope sampled units. If the overall response rate for the item fell below 70 percent, the item will be footnoted in NCES publications with “Item response rate is below 70 percent” as a method of cautioning the user that the low item response rate introduces some potential for bias in the imputation procedure. For any characteristic where the item response rate was less than 85 percent, a more detailed analysis was done by stratification characteristics. The results were highlighted if that particular cell had a significantly higher or lower response rate than the file as a whole and bolded if the difference was noteworthy. A noteworthy difference met the following conditions:

- The difference relative to the overall response rate for the particular item was greater than 10 percent.
- The absolute difference was greater than one percentage point.
- The coefficient of variation was less than 15 percent.
- The cell had at least 30 interviews.

Table 12 presents the number of items by response rate for each file. Of particular concern are the items with an overall response rate below 70 percent. These items are listed in exhibit 2.

Table 12. Number of questionnaire items, by response rate category and data file: 2004–05

Data file	Total number of items	Number of items with a response rate of...			
		95.0 percent or above	85.0 to 94.9 percent	70.0 to 84.9 percent	Below 70 percent
Current teacher	170	126	37	6	1
Former teacher	100	41	53	2	4

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current Teacher Data File” and “Former Teacher Data File,” 2004–05.

Exhibit 2. Items with a response rate below 70 percent, by data file: 2004–05

Data file	Item
Current teacher	Item 44: How many family members living in your household during 2004 were under the age of 5?
Former teacher	Item 26: Would any factors other than the ones listed above influence your decision to return to the position of a K–12 teacher? Item 26 factors: If “Yes,” what factors? Item 31: How many family members living in your household during 2004 were under the age of 5? Item 35 (other): Where is your access to the Internet—at home, work, or elsewhere?

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current Teacher Data File” and “Former Teacher Data File,” 2004–05.

Summary of Conclusions.

Current Teachers—Seven items had a response rate below 85 percent, requiring a closer examination. One item had a response rate below 70 percent, necessitating a footnote. A closer examination of response rates revealed no substantial evidence of a bias.

Former Teachers—Six items had a response rate below 85 percent, requiring a closer examination. Four items had a response rate below 70 percent, necessitating a footnote. A closer examination of response rates revealed no substantial evidence of a bias.

Chapter 6. Data Processing

Once the 2004–05 Teacher Follow-up Survey (TFS) data collection was completed, data processing began. U.S. Census Bureau clerical processing staff in Jeffersonville, Indiana, was responsible for the first phase of data processing. This involved using the Automated Tracking and Control (ATAC) system to assign a check-in code for each paper TFS questionnaire received to indicate its status; TFS questionnaires completed on the Internet were automatically assigned check-in codes by the internet instrument. The data from completed questionnaires then were captured (converted from paper to electronic format) and sent to Census Bureau analysts in reformatted SAS datasets so the analysts could more easily review the data. Census Bureau analysts were responsible for resolving outcome codes, conducting preliminary data reviews, and assigning preliminary interview status. They performed a series of computer edits on the data to identify and resolve inconsistencies and assigned a final interview status to each case. The final interview status is the final determination of whether each case was an interview, a noninterview, or out of scope for TFS, using stricter criteria than those used to determine the preliminary interview status of each TFS case. After these steps were completed, there were still items that were “not answered.” These items were imputed during the final stages of data processing. Once all stages of data processing were completed, the final data products were created.

Questionnaire Check-in

Check-in of Paper Questionnaires

The Census Bureau clerical processing staff received questionnaires directly from both the sample teachers and from the 12 Regional Offices’ field follow-ups.¹⁶ Upon receipt, staff assigned a check-in code (e.g., completed questionnaire, blank questionnaire, refusal, teacher deceased) to each questionnaire to indicate its status. A paper questionnaire was checked-in as a “completed questionnaire”¹⁷ when the respondent completed at least one item. The exception to this rule was when item 1 on either questionnaire indicated that the respondent was sent the incorrect questionnaire type due to the former school’s inaccurate reporting of the respondent’s teaching or other occupational status on the Teacher Status Form¹⁸; these respondents were assigned a unique “switcher” check-in code indicating this. See chapter 4 for further information about “switchers.” The remaining check-in codes were assigned based upon any notes or indicators written on the cover of or attached to the returned questionnaire. If staff members were unsure of what check-in code to assign, they sent the case to Census Bureau headquarters analysts for reconciliation.

All TFS questionnaires were assigned a check-in code. The code was entered into the ATAC system. If there was a change to the address either marked on the questionnaire label or indicated by the post office, the address information was updated in the ATAC system as well. The questionnaires were then grouped

¹⁶ The Census Bureau has Regional Offices in Atlanta, Boston, Charlotte, Chicago, Dallas, Denver, Detroit, Kansas City, Los Angeles, New York, Philadelphia, and Seattle.

¹⁷ The check-in code indicating a “completed questionnaire” does not necessarily indicate that a case is a “complete interview.” Interview status was assigned both during the preliminary and final interview status (ISR) stages of data processing. See the “Preliminary ISR Classification” and “Final Interview Status Edit” sections of this chapter for a detailed description of the criteria for former and current teacher questionnaire complete interviews.

¹⁸ The Teacher Status Form was mailed to TFS sampled schools that provided lists of teachers during the 2003–04 Schools and Staffing Survey. These schools were asked to complete the form by indicating whether each teacher listed was still teaching in that school (stayer), was teaching in another school (mover), or left the teaching profession all together (leaver).

into batches by questionnaire type, doc type,¹⁹ and check-in code. Only completed interviews were sent on for the next step of data processing, which was data capture.

Check-in of Internet Questionnaires

Approximately 12 percent of respondents completed the internet version of the TFS questionnaire that included the questions for both the current and former teacher questionnaires. As respondents submitted their questionnaires online, the internet instrument automatically edited them for critical items, which are those items that must be answered in order for a questionnaire to be considered complete. While the paper questionnaires were assigned a check-in code of “completed questionnaire” if at least one item was completed, the internet questionnaires were assigned a check-in code of complete as long as all critical items were complete. The automated edits on these internet forms helped to reduce the amount of editing and review that these cases would have had to go through at later stages of data processing. For a description of the critical items for TFS, refer to exhibit 3 in the “Preliminary Data Review” section of this chapter.

Several of the critical items on the TFS internet version served as screener questions because the respondent’s answers to these questions determined which questionnaire path the respondent would follow. The combination of the first two items determined whether the respondent went down the leaver (i.e., former teacher) path or stayer/mover (i.e., current teacher) path. The first item asked the respondent if he or she currently taught any regularly scheduled classes in any of grades prekindergarten through 12. If not, the respondent would automatically follow the former teacher path of questions. Otherwise, the second item asked the respondent to classify his or her current position at the current school.

As long as the respondent was not a short-term substitute, a student teacher, or a teacher aide, he or she would follow the current teacher path of questions.²⁰ Further down the current teacher questionnaire path, a question asked whether the respondent was teaching at the same school as previous year. This question determined whether the current teacher respondent would follow the “mover” path of questions.

If all of the above screener items (when applicable, depending on the questionnaire type) as well as a few additional items were completed, the check-in code automatically reflected that the case was a complete interview. See the “Final Interview Status Edit” section of this chapter for a detailed description of the criteria for former and current teacher questionnaire complete interviews.

Data Capture

Data Capture of Paper Questionnaires

The 2004–05 TFS data were captured (i.e., converted from paper to electronic format) using manual data keying. During check-in, the questionnaires were split into groups called “batches” by questionnaire type, doc type, and check-in code, and then they were manually keyed. Manual data keying for both TFS questionnaires was accomplished using a Key from Paper (KFP) data capture system. Analysts wrote specifications for data keying, and programmers used these specifications to develop the KFP system for each survey prior to keying. It was programmed to present screens of questionnaire items to data keying

¹⁹ The doc type indicates if the questionnaire that was received by the clerical staff was from the first mailing, second mailing, or field follow-up.

²⁰ For TFS, teacher aides, student teachers, and short-term substitute teachers were not considered regular classroom teachers. If a respondent was a regular classroom teacher during the 2003–04 Schools and Staffing Survey school year and changed assignments to one of these three positions for the 2004–05 school year, then he or she was considered to be a leaver and should have completed the former teacher questionnaire.

staff, who worked through each page of the questionnaire and keyed any entries into the appropriate fields on the screens.

All KFP entries were 100 percent verified by the keying staff, meaning that each field was keyed twice and the results were compared automatically for discrepancies and, subsequently, verified. The verification during this operation allowed up to a 1 percent error on a field-to-field basis. Error rates were calculated by dividing the total number of keying errors by the total number of keyed fields.

If an entire batch of questionnaires had a total error of more than 1 percent (i.e., all keying errors for that batch divided by the total keyed fields in that batch exceeded 1 percent), the batch was unacceptable, and all questionnaires within the batch were 100 percent verified a second time. A more detailed discussion of data capture and results of the keying verification for the TFS questionnaires are provided in “Appendix F. Quality Assurance for TFS Keying and Mailout Operations.”

Images of each questionnaire were captured after data entry was completed. The image files were used during subsequent steps of data processing to view the images of the actual questionnaires electronically.

Internet Questionnaires

Data for the internet questionnaires did not go through a separate data capture operation; as respondents completed questions on the TFS website, data were automatically captured and saved by the system. At this point, the data were already in electronic format. Unlike the TFS paper questionnaires, there were no images of the internet questionnaires to be captured and stored as image files (since this was a web-based survey). Therefore, during subsequent steps of data processing, Census Bureau analysts were not able to refer back to the actual questionnaires as a reference.

Reformatting

After the paper questionnaire data were captured, the output files were reformatted into SAS datasets. The internet data were in a different electronic format and also needed to be reformatted. Census Bureau analysts provided specifications to programmers that mapped the internet variables to the variables in the reformatted paper questionnaire data. This allowed analysts to proceed with data processing and cleaning with the paper and internet data together in the same SAS datasets.

Preliminary Data Review

Once all of the data were reformatted, Census Bureau analysts began an extensive preliminary data review process. During data review, analysts examined frequencies of each data item in order to identify any suspicious values (e.g., if an item’s response was an extreme value or outside of the range of possible answer choices or if an answer seemed unlikely given the respondent’s other responses within the survey). When suspicious values were found, analysts looked at the image of the questionnaire (for paper questionnaires only) to verify that the data were keyed correctly. Fixes were made to the data files when necessary.

The TFS data were split into two different files when undergoing the preliminary stages of data review. There was a former teacher data file for leavers and a current teacher data file for stayers and movers. During data review, analysts checked that the appropriate cases were in each data file. They also checked survey counts by type to make sure that there was consistency between the actual counts of stayers, movers, and leavers and the variable that programmers created to indicate stayer/mover/leaver status. This

variable kept track of “switcher cases” (i.e., cases where the respondent’s actual teaching or other occupational status differed from that reported by the school on the Teacher Status Form).

In addition, analysts reviewed cases in which any critical item was not answered or an insufficient number of other questionnaire items were completed. Analysts viewed these cases as potential problems and verified that data were keyed correctly by reviewing an electronic image of the questionnaire (for paper questionnaires only). See exhibit 3 for a detailed list of critical items for TFS.

Exhibit 3. TFS critical item table, by questionnaire: 2004–05

Questionnaire	Page	Item	Source code ¹	Description
Questionnaire for Former Teachers— 3 critical items	5	1a	F0050	Do you currently teach any regularly scheduled class(es) in any of grades pre-K–12? (Response should be “No” in order to continue with the former teacher questionnaire path.)
	OR:			
	5	1c	F0051	How do you classify your position at your current school, that is, the activity at which you spend most of your time during the school year? (Response should be short-term substitute, student teacher, or teacher aide in order to continue with the former teacher questionnaire path.)
	6	2	F0553	What is your main occupational status?
Questionnaire for Current Teachers— 4 critical items	5	1a	F0050	Do you currently teach any regularly scheduled class(es) in any of grades pre-K–12? (Response should be “Yes” in order to continue with the current teacher questionnaire path.)
	5	1b	F0051	How do you classify your position at your current school, that is, the activity at which you spend most of your time during the school year? (Response should not be short-term substitute, student teacher, or teacher aide.)
	8	7	F0058–F0072	In which grades are the students you teach at your current school?
	14	19a	F0136	Are you currently teaching in the same school as you were last year (2003–04)? ²

¹ Source codes are used to identify specific items on the Schools and Staffing Survey questionnaires. For each questionnaire item, the four-digit source code can be found to the left of the first answer choice.

² Although each respondent’s stayer or mover status was provided by his or her 2003–04 school on the Teacher Status Form, it was not always accurate. This item determined each respondent’s final stayer/mover status. If he or she responded “yes” to the question, “Are you currently teaching in the same school as you were last year (2003–04)?” then the respondent was a stayer. If the respondent responded “no,” then he or she was a mover.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

If critical item data were in fact missing, analysts attempted to use nonintrusive means of obtaining the data (e.g., imputation from other items on the questionnaire) so that these cases would not become noninterviews due to insufficient data in later stages of data processing.

Finally, Census Bureau analysts were responsible for resolving the ATAC check-in codes of a handful of former and current teacher questionnaire cases during the preliminary stages of data review. This occurred in cases in which both former and current teacher questionnaire was received by the clerical processing staff. In some cases, both were completed interviews, and analysts had to determine which

questionnaire represented the respondent's current situation by looking at images of both questionnaires. The analysts adjusted the check-in codes to indicate which to keep as a complete interview and which to drop.

In other cases, more than one of the same questionnaire type was received from a particular respondent, and analysts had to remove the duplicate case by deciding which questionnaire to keep and which to drop based upon the data in each independent questionnaire.

Preliminary Interview Status Recode (ISR) Classification

The next step in data processing was the preliminary determination of each case's interview status recode (ISR); that is, whether each case was an interview, a noninterview, or out of scope for TFS. In general, cases with an "out-of-scope" outcome code (ISR = 3) for the preliminary ISR were teachers who were deceased, had moved out of the United States, or had never been teachers (e.g., school administrators who had reported incorrectly on the Schools and Staffing Survey [SASS] during the previous school year). An out-of-scope code for each out-of-scope case was created to indicate the reason why the case was out of scope.

Cases with data entries were classified as completed interviews (ISR = 1). Cases without any data or cases in which the respondent refused to complete the survey were classified as noninterviews (ISR = 2). A noninterview code was created for each noninterview case to indicate the reason why the case was a noninterview.

During the data review of the preliminary ISR data, Census Bureau analysts looked at the specific cases that were checked-in as "complete questionnaires" but changed to out of scopes or noninterviews during the preliminary ISR classification. Analysts looked at the electronic images of these cases and, in some cases, found notes and other indications from the respondent within the questionnaire that led the analysts to believe that an inconsistent out-of-scope or noninterview code had been assigned. They reassigned appropriate codes to these cases during this stage of data processing.

A more detailed discussion of interview status can be found in the "Final Interview Status Edit" section of this chapter.

Computer Edits

After preliminary data review and preliminary ISR classification, the cases that were classified as complete interviews during the preliminary ISR were submitted to a series of computer edits. These edits consisted of a range check, a consistency edit, and a blanking edit.

The first of the computer edits was the range check, which was used to delete entries that were outside the range of acceptable values that were set prior to the administration of TFS. For example, the range of acceptable values for item 38 on the current teacher questionnaire ("During the current school year, what is your academic year base teaching salary?") was \$0 to \$200,000. Therefore, a salary entry of \$310,000 would be deleted and recoded as a missing item by the range check. The purpose of this check was to eliminate any extreme values, such as this \$310,000 salary, a highly unlikely base salary for a teacher.

Actual changes to the data were made during the consistency edit. The consistency edits identified inconsistent entries within each case and, whenever possible, corrected them. If the inconsistencies could not be corrected, the entries were deleted and recoded as missing items. These inconsistencies were

- within items (e.g., if the yes/no part of current teacher questionnaire item 37a—whether the respondent had any earnings from teaching summer school in the current or any other school—was “no,” but the earning amount was greater than zero for the second part of the item); and
- between items (e.g., if former teacher questionnaire item 4c indicated that the respondent was working without pay in a family business, farm, or volunteer job, but item 6 indicated that the earnings at this job were greater than zero).

In addition, the consistency edit filled in some items where data were missing or incomplete by using other information on the same data record. For example, if former teacher questionnaire item 9 (“Do you consider yourself to be retired from the position of a K–12 teacher?”) was not answered, but item 2 (“What is your main occupational status?”) was marked “retired,” then “yes” was marked for item 9 during the consistency edit.

The blanking edits deleted extraneous entries (e.g., in situations where skip patterns were not followed correctly) and assigned the “not answered” code to items that the respondent should have answered but did not.

The only records that were put through this series of edits were those classified as completed interviews during the preliminary ISR. The tables in “Appendix G. Changes Made to TFS Variables During Computer Edits, by Data File” show the number of edit changes made to entries for each of the variables within each data file. These changes are summarized in table 13 below.

Table 13. Summary of changes made to variables in the computer edits, by data file: 2004–05

Data file	Total number of cases	Total number of variables in questionnaire	Number of variables changed during edits, by percentage of all TFS data records on which the variable was changed			
			None	1–15 percent	16–30 percent	More than 30 percent
Former teacher	2,681	104	34	69	1	0
Current teacher	4,806	200	121	79	0	0

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Final Interview Status Edit

After the range checks, consistency edits, and blanking edits were run and reviewed by analysts, the records were put through an edit to make a final determination of whether the case was eligible for the survey and, if so, whether sufficient data had been collected for the case to be classified as a completed interview. A final ISR value was assigned to each case as a result of this edit.

1. Questionnaire for Former Teachers

- A case was classified as **out of scope** (ISR = 3) if
 - the sampled person was deceased; or
 - the sampled person moved outside of the United States; or
 - the sampled person had never been a teacher.
- A case was classified as an **interview** (ISR = 1) if
 - none of the conditions for out-of-scope cases was met; and
 - the sampled person reported that he/she did not currently teach any regularly scheduled classes in any of grades pre-K–12 (F0050) or reported that his/her job classification was a short-term substitute, student teacher, or teacher aide (F0051); and

- the sampled person reported his or her main occupational status (F0553); and
- there were data in at least 10 percent of the remaining items (nine answered items).
- A case was classified as a **noninterview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

2. **Questionnaire for Current Teachers**

- A case was classified as **out of scope** (ISR = 3) if
 - the sampled teacher was deceased; or
 - the sampled teacher had moved outside of the United States; or
 - the sampled person had never been a teacher.
- A case was classified as an **interview** (ISR = 1) if
 - none of the conditions for out-of-scope cases was met; and
 - the sampled teacher indicated that he/she taught any regularly scheduled class(es) in any of grades pre-K–12 (F0050); and
 - the sampled teacher reported his/her job classification (F0051); and
 - the sampled teacher reported the grades in which the students that he/she currently taught were (F0058–F0072); and
 - the sampled teacher indicated whether he/she was teaching in the same school as the previous year (F0136); and
 - there were data in at least 10 percent of the remaining items (16 answered items).
- A case was classified as a **noninterview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

The preliminary ISR and final ISR counts for each data file and the percentage of change for each ISR classification are shown in table 14.

Table 14. Preliminary and final interview status recode (ISR) counts and percentage change, by ISR category and data file: 2004–05

Data file	Sample size	Preliminary ISR			Final ISR			Percentage change ¹		
		Inter-views	Non-inter-views	Out of scope	Inter-views	Non-inter-views	Out of scope	Inter-views	Non-inter-views	Out of scope
Former teacher	3,039	2,681	300	58	2,653	328	58	-1.04	9.33	0
Current teacher	5,218	4,806	381	31	4,776	411	31	-0.62	7.87	0

¹ The percentage change for each ISR category (interview, noninterview, out of scope) is computed by subtracting the number of cases in the preliminary ISR count from the number of cases in the final ISR count, and dividing by the number of cases in the preliminary ISR count.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Creating Imputation Flags

After the final ISR edits were run, there were still cases with “not answered” values on the files for some variables. Values were created for these items in the next step of the processing, which was imputation. There were three different stages of imputation: stage 1, stage 2, and clerical imputation. After each stage of imputation, the computer edits (described in the “Computer Edits” section of this chapter) were re-run to ensure that the imputed data were consistent with the existing questionnaire data. The imputation stage of data processing is described further in “Chapter 7. Imputation Procedures.”

Because the consistency edits and imputations made actual changes to the TFS data, different processing flags were created to indicate these changes. Flags that were used in the consistency edit stage of data processing are in the format $ef_{[source\ code]}+1$. That is, each time a change was made to an item due to a consistency edit, the value of the flag for that item increased by one. This way analysts could keep track of how many times a consistency edit changed the data throughout the duration of data processing.

Flags that were used in the imputation stage of data processing were different than those used for consistency edits. Rather than simply counting how many times an imputation edit changed data, imputations flags were assigned specific values to indicate exactly how items were being imputed. Imputation flags are in the format $f_{[source\ code]} = _$. The definitions for each imputation flag used in the TFS are described in exhibit 4 below.

Exhibit 4. Flags used in processing TFS questionnaires: 2004–05

Imputation flag values	Description of flag
$f_{[source\ code]} = 0$	Not imputed
$f_{[source\ code]} = 1$	Original value was ratio adjusted
$f_{[source\ code]} = 2$	Value was imputed by using data from other variables in same record
$f_{[source\ code]} = 3$	Value was imputed by using data from school or teacher record
$f_{[source\ code]} = 7$	Imputed from donor
$f_{[source\ code]} = 8$	Clerical imputation

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Data Products

After all stages of imputation were completed and the blanking and consistency edits were run once again, the data were split into two files by questionnaire type. One file contained the records for current teachers (Questionnaire for Current Teachers data) and the other contained records for former teachers (Questionnaire for Former Teachers data).

Each of these files included all variables, including frame variables, survey variables, created variables, weighting variables, and imputation flags. These files were used as the source files for the restricted-use datasets, in which some of the processing and sampling variables were removed, and data nondisclosure procedures were implemented. (See chapter 10 for additional description of the restricted-use data files.)

Chapter 7. Imputation Procedures

Overview

Once the computer edits were run on the 2004–05 Teacher Follow-up Survey (TFS) data and reviewed by U.S. Census Bureau analysts, “not answered”²¹ items still remained in the datasets. (For more details on computer edits see chapter 6.) In order to fill these items with data, questionnaires were put through three independent stages of imputation. From one stage to the next, more assumptions were made about how the participant might have responded to the item. The first stage of imputation involved using items from the same TFS questionnaire or items from the corresponding 2003–04 Schools and Staffing Survey (SASS) school or teacher questionnaire to impute data for the missing items. Any remaining unanswered items were imputed in the second stage of imputation. This stage included “hot deck” imputation (in which donor records were established and used to impute data), ratio imputation by subsamples of data, and random ratio imputation by subsamples of data. Once the first two stages of imputation were completed, any remaining unanswered items were imputed clerically by Census Bureau analysts in the third and final stage of imputation.

Each time an unanswered TFS item was imputed, a numerical flag corresponding to the stage and type of imputation was assigned to the imputed item. These flags identify to data users which items were imputed, and the method by which they were imputed. Therefore, data users can decide whether to include imputed data in their analyses, and if so, which types of imputed data they want to use.

First-Stage Imputation

During the first stage of imputation, unanswered survey items were imputed with a response using data either from other items in the same TFS questionnaire or from items in the related 2003–04 SASS school or teacher questionnaires. Imputed values were valid responses because they were within the range of acceptable values that was set prior to the administration of TFS and were consistent with the respondent’s answers to related items. During this stage of imputation, data from the Questionnaire for Former Teachers and the Questionnaire for Current Teachers were kept in two separate files.

- *Imputing with other items on the same TFS questionnaire record.* Based on entries from related items on the TFS record, assumptions were made about how the respondent might have answered items. For example, item 8 on the current teacher questionnaire asked how the sampled teacher’s classes were organized. If the teacher indicated that he or she was a general kindergarten or elementary grade teacher in item 5 (main teaching assignment field), then item 8 was marked to indicate that the respondent instructed the same group of students all or most of the day in multiple subjects (self-contained class).
- *Imputing with related items on the 2003–04 SASS school or teacher record.* Since each TFS sampled teacher participated in the 2003–04 SASS, information from the SASS record was used to impute values in the first stage of imputation. For example, item 17 on the former teacher questionnaire (item 28 on the current teacher questionnaire) asked if any of the respondent’s students participated in a required state or district assessment program in the subject that the respondent taught the prior school year. If this item was blank and the respondent indicated in the 2003–04 SASS teacher questionnaire that his or her students did, in fact, participate in such an assessment program, then the item was marked “yes”; otherwise, it was marked “no.”

²¹ Some items were correctly left blank by the respondent because of skip patterns in the questionnaire. For these respondents, the items were changed to “valid skips” during the blanking edit stage of data processing. Valid skips were not imputed and were not classified as “not answered” items.

In addition, many sampled teachers' corresponding school completed the 2003–04 school questionnaire; if this was the case, information from the SASS school record was used to impute values during the first stage of imputation.

Since there were two different sources for stage 1 imputation, each source was assigned a separate value for the stage 1 imputation flag. The definitions of these flags are as follows:

- 0 Data were reported by the sampled teacher. No adjustment or imputation was made.
- 2 The item was imputed based on data from another item within the same TFS questionnaire.
- 3 The item was imputed based on data from the 2003–04 SASS school or teacher questionnaire associated with the TFS sampled teacher.

Tables 15 and 16 at the end of the chapter include a summary of the amount of imputation performed in stage 1 processing.

Second-Stage Imputation

Those items still unanswered after stage 1 imputation entered the second stage of imputation. Before entering this stage, the former and current teacher questionnaire datasets were split up further. The former teacher questionnaire data file became two separate files; one file contained former teacher questionnaire data for sampled teachers from traditional public and public charter schools, and the other file contained former teacher questionnaire data for sampled teachers from private schools.

Two main approaches were used in the second stage of imputation for TFS. In one approach (hot deck imputation), data were imputed from items found on questionnaires of the same type (former or current teacher questionnaire) that had certain characteristics in common. These records are called “donor records.” In the second approach to stage 2 imputation, data were split into subsamples based upon grade levels offered in their 2003–04 school (in subsample ratio imputation) or other variables related to the item being imputed (in random subsample ratio imputation), and items were imputed so that the distribution of responses in each of these subsamples was preserved. Both hot deck imputation and subsample ratio imputation are explained further in this chapter.

Items that were imputed during the second stage of imputation were assigned a particular numerical flag. The definition of the flag is as follows:

- 7 The item was imputed during the second stage of imputation by hot deck or subsample ratio imputation.

Hot Deck Imputation

During hot deck imputation, donor records were established, and imputation was based on the data within the donor's record. Donors were selected based on the way they answered specific items; these items are called “matching variables.” If two sampled teachers answered the selected matching items the same way, it was assumed that they were comparable and that imputation of one data item from the donor record was reasonable and would provide a response similar to one the sampled teacher would have given on his or her own.

The matching variables used to establish donor relationships were selected based on the type of data the donor would supply to the record being imputed. For example, if a current teacher questionnaire respondent's answer to a given item might be influenced by the respondent's teaching field and the

proximity of the school to a city, then these variables were used to find another sampled teacher in a school with similar characteristics.

The datasets were sorted by matching variables in the order of their importance, that is, how much influence the matching variables had in predicting the value of the variable being imputed. Sorting the data helped to ensure that the appropriate donors were the most similar to the record undergoing imputation.

For stage 2 hot deck imputation among *public school sampled teachers*, the states in which the sampled teachers' 2003–04 schools (as reported in SASS) were located were combined into four groups by their geographic region in order to increase the size of the data pool. These four regions were the Northeast, Midwest, South, and West. All imputation was done within the geographic region group; that is, the donor record had to be from a sampled teacher within the same region as the incomplete record.

- *Former public school sampled teachers.* Within each region group, the records were sorted by the following variables:
 - STATE State in which respondent's 2003–04 school was located;
 - WORK Whether the respondent was currently working; and
 - T0416 Sampled teacher's birth year (from which age was derived).
 The records were sorted by STATE / WORK / T0416.
- *Current public school sampled teachers.* Within each region group, the records were sorted by the following variables:
 - STATE State in which respondent's 2003–04 school was located,
 - STAYER Whether the respondent was teaching at the same school as during the 2003–04 school year,
 - TFSLEVEL Grade levels taught as reported in TFS, and
 - TEACHCODE Respondent's main teaching assignment field during the 2003–04 school year.
 The records were sorted by STATE / STAYER / TFSLEVEL / TEACHCODE.

For stage 2 hot deck imputation among *private school sampled teachers*, the typologies of the sampled teachers' 2003–04 schools (as reported in SASS) were combined into three groups of affiliations. These three affiliations were Catholic, other religious, and nonsectarian. All imputation was done within the affiliation group; that is, the donor record had to be from a sampled teacher within the same affiliation group as the incomplete record.

- *Former private school sampled teachers.* Within each affiliation group, the records were sorted by the following variables:
 - TYPOLOGY Typology of respondent's 2003–04 school;
 - WORK Whether the respondent was currently working; and
 - T0416 Sampled teacher's birth year (from which age was derived).
 The records were sorted by TYPOLOGY / WORK / T0416.
- *Current private school sampled teachers.* Within each affiliation group, the records were sorted by the following variables:
 - TYPOLOGY Typology of respondent's 2003–04 school;
 - STAYER Whether the respondent was teaching at the same school as during the 2003–04 school year;
 - TFSLEVEL Grade levels taught as reported in TFS; and

- TEACHCODE Respondent’s main teaching assignment field during the 2003–04 school year.

The records were sorted by TYPOLOGY / STAYER / TFSLEVEL / TEACHCODE.

When there were not enough donor records within any given stratification cell, a collapsing routine was instituted. This was done to ensure that values inconsistent with other data on the same record would not be imputed simply because a record was close to the boundary between the stratification cells (e.g., there were other records that were suitable donors or the record was not similar enough to be a donor). For example, for the current teacher questionnaire, the collapsing routine for the matching variable TEAEXPER (the sampled teacher’s level of teaching experience) is shown in the matrix below. Each row of the matrix represents a separate situation. An explanation follows.

(1, 2, 0,
2, 3, 1,
3, 2, 0)

The values for the variable TEAEXPER are as follows:

- TEAEXPER = 0 No donor record was found for the case.
- TEAEXPER = 1 The sampled teacher has been teaching full and/or part time for 3 years or fewer.
- TEAEXPER = 2 The sampled teacher has been teaching full and/or part time for 15 years or fewer.
- TEAEXPER = 3 The sampled teacher has been teaching full and/or part time for 16 or more years.

If the value for TEAEXPER on the record with missing data was 1 and there was no available donor where TEAEXPER = 1, the collapsing program looked for a donor where TEAEXPER = 2. It did not look for cases where TEAEXPER = 3. When the collapsing routine hit 0, there was no donor available for this case. Likewise, if the value for TEAEXPER on the record with missing data was 2 and there was no available donor where TEAEXPER = 2, the collapsing program searched for a donor where TEAEXPER = 3, then TEAEXPER = 1. Finally, if the value for TEAEXPER on the record with missing data was 3 and there was no available donor where TEAEXPER = 3, the collapsing program looked for a donor where TEAEXPER = 2. It did not look for cases where TEAEXPER = 1. When the collapsing routine hit 0, there was no donor available for this case. In instances where no donor was available, the value was either imputed using subsample ratio imputation or was clerically imputed in the third stage of imputation.

Once the donor relationship was established, the donor record provided data items either directly or indirectly to the imputed record. For some items, such as item 8 on the former teacher questionnaire (how long the respondent planned to remain in his or her current position), data were copied directly to the record with the missing data. For other items, entries on the donor records were used as factors along with other data from the questionnaire to fill the incomplete item. For example, the unanswered item requesting the sampled teacher’s current salary (Questionnaire for Current Teachers item 38) was filled by accepting the donor’s ratio of the previous year’s salary (T0399 on the SASS teacher questionnaires) to the current year’s salary and applying the ratio to the sampled teacher’s previous year’s salary on the imputed record.

If an unanswered item was imputed using a donor record and the donor answered using the “other” option, then the write-in “please specify” portion was typically not imputed. In addition, open-ended

items that required the sampled teacher to write down his or her response, rather than selecting a provided response, were not imputed. This is because many of the write-in items asked about things that were very specific to each sampled teacher. For instance, Questionnaire for Former Teachers item 4a asked for the usual activities or duties at the respondent's job. Items such as these were not imputed and were given a value of -9, meaning "missing data," in the final data files.

There was one exception to this for an item that was not very respondent-specific; this exception was Questionnaire for Former Teachers item 35/Questionnaire for Current Teachers item 48 which asked where the respondent had access to the Internet. If a donor answered using the "other" option, the write-in "where" portion was also imputed.

In order to prevent a single record from having an undue impact on the data, a record could only be used as a donor a maximum of five times. There were no exceptions to this procedure.

Subsample Imputation

After the hot deck portion of the stage 2 imputation was completed, the data for sampled teachers from traditional public and public charter schools were merged with the data for sampled teachers from private schools by questionnaire type (i.e., former or current teacher questionnaire). Therefore, all former teacher questionnaire data were in one file, and all current teacher questionnaire data were in a second file. Data remained in these two files for the subsample ratio and random subsample ratio portions of the stage 2 imputations and the stage 3 clerical imputations.

Subsample Ratio Imputation

Items that remained unanswered after the hot deck imputation and that were categorical variables were imputed using subsample ratio imputation. First, data were divided into three subsamples (or groupings) based on the grade levels offered at the sampled teacher's school from the 2003–04 SASS school year (LEVEL). The groups were defined as follows:

- LEVEL = 1 Grades K through 6 (elementary);
- LEVEL = 2 Grades 7 through 12 (secondary); and
- LEVEL = 3 Combined grades (K through 12 and ungraded).

Next, the distribution (ratio) of responses to each unanswered categorical item was found within each LEVEL grouping (subsample). Finally, the unanswered items were assigned answers according to the subsample to which they belonged in order to preserve the response ratios within that subsample.

For example, among the subsample of LEVEL = 1 schools where a particular item with four answer categories was answered, that item had the following distribution (ratios) of answers: 40 percent chose the first category, 20 percent chose the second, 30 percent chose the third, and 10 percent chose the fourth category. This distribution would then be used to impute the records with missing data for this item where LEVEL = 1, so that the distribution of responses was preserved. Similarly, the percentage distribution of responses for records where LEVEL = 2 was calculated and the records with missing data that had the same LEVEL value were imputed accordingly. This operation was performed for all LEVEL values (subsamples).

Random Subsample Ratio Imputation

Random subsample ratio imputation is a method similar to subsample ratio imputation. However, it is more effective at handling items that are continuous variables—numeric variables for which the respondent is not provided with a fixed set of answer choices (e.g., salary). The program sorted the data into groupings based on the value of any variables that might have impacted the sampled teacher’s answer to the item with missing data. Continuous variables were assigned a random probable value (e.g., a value between the 5th and 95th percentile) to cases with missing responses based on the range of values provided by sampled teachers with similar characteristics.

Census Bureau analysts determined which variables might have impacted the sampled teacher’s answer to the item with missing data and used them to define a subsample within the dataset. For example, when imputing Questionnaire for Former Teachers item 27, the lowest acceptable teaching salary that would be required for the sampled teacher to return to teaching, the data were sorted into subsets based on

- item 25f, how an increase in salary would influence the decision to return to teaching;
- item 13f, the influence salary had on the respondent’s decision to leave teaching;
- item 29, the respondent’s total combined family income; and
- the base salary received as a teacher the prior year as indicated on the 2003–04 SASS survey.

If a record within this subsample had an unanswered item, an answer was randomly assigned so that the distribution of responses to that item remained the same for all records within the subsample. For example, if teachers who indicated that an increase in salary would be “extremely important” in influencing the decision to return to teaching reported

- that better salary and benefits were “very important” in the decision to leave,
- a combined family income of less than \$35,000,
- a previous base teaching salary of less than \$20,000, and
- a value for item 27 that ranged from \$20,000 in the 5th percentile to \$50,000 in the 95th percentile,

then the imputation procedure randomly assigned values to teachers with missing data that fell within this percentile range.

Tables 15 and 16 at the end of the chapter include a summary of the amount of imputation performed in stage 2 processing.

Third-Stage Imputation

In some cases, items still remained “not answered” after the first two stages of imputation. This happened when there was no available donor or the value imputed by the computer was inconsistent with values in other items.²² Historically, certain types of items on SASS and TFS questionnaires have been imputed clerically during a third stage of imputation. For the 2004–05 TFS, all items still unanswered after the first two stages of imputation were imputed clerically during this third stage of imputation.

Items that were imputed during the third stage of imputation were assigned a particular numerical flag, which was defined as follows:

²² After the second stage of imputation was complete, the blanking and consistency computer edits were re-run. If an imputed entry was inconsistent, it was adjusted or deleted by the consistency edit. For more information about computer edits, see chapter 6.

8 The item was imputed clerically during the third stage of imputation.

In order to determine an appropriate value for each unanswered item, Census Bureau analysts reviewed

- the original image of the questionnaire (for paper questionnaires only) to see if the sampled teacher had made any notes in the margin that might provide insight;
- other items within the same record with related information;
- similar cases to get an understanding of what the sampled teacher might have answered; and
- average responses for that item.

Tables 15 and 16 include a summary of the amount of imputation performed in the third stage of processing.

Post-Imputation Processing

After both the second and third stages of imputation were completed, the computer edits were re-run and any remaining data issues were resolved by Census Bureau analysts. (See chapter 6 for details on computer edits.) At this point, any item that was imputed more than 15 percent of the time was analyzed as part of the item bias analysis. (See chapter 5 for details about nonresponse bias analysis.) The computer edits were run again to ensure that values imputed in each stage of imputation were within acceptable ranges and were consistent with other items on the questionnaire.

Final File Imputation Tables

After the hot deck portion of stage 2 processing, the datasets were merged so that the data were in two files: one file for the former teacher questionnaire data and the other for the current teacher questionnaire data. The number of source codes²³ (specific items) that were imputed for a given percentage of records during a given stage of processing appears for each file below in tables 15 and 16. For example, during stage 1 imputation 12 survey items were imputed for between 1 and 15 percent of the former teacher items.

Table 15. Number of source codes imputed among former teacher items, by percentage of records receiving imputation and imputation stage: 2004–05

Imputation stage	Number of source codes imputed, by percentage of records receiving imputation			
	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	82	12	0	2
Stage 2	15	81	0	0
Stage 3	90	6	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Former Teacher Restricted Use Data File,” 2004–05.

²³ Source codes are used to identify specific items on the SASS and TFS questionnaires. For each questionnaire item, the four-digit source code can be found to the left of the first answer choice.

Table 16. Number of source codes imputed among current teacher items, by percentage of records receiving imputation and imputation stage: 2004–05

Imputation stage	Number of source codes imputed, by percentage of records receiving imputation			
	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	164	24	0	0
Stage 2	46	141	1	0
Stage 3	176	12	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the survey names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current Teacher Restricted Use Data File,” 2004–05.

“Appendix H. Percentage of TFS Variables Changed During Three Stages of Imputation, by Data File” contains the total number of imputations applied at each stage to each source code.

Chapter 8. Weighting and Variance Estimation

Contained in this chapter is a discussion of the weighting and variance procedures used for the 2004–05 Teacher Follow-up Survey (TFS). The chapter discusses first the weighting procedure used to compute final weights for the interviewed teachers and next variances. Weighting is the last step in data processing. Variances are computed to estimate the reliability and are a product of the weighting procedure.

Weighting

This section describes the weighting procedure for each teacher who responded to TFS. The general purpose of weighting is to scale up the sample estimates to represent the target survey population. The steps for weighting types of respondents were similar to those used for the 2003–04 Schools and Staffing Survey (SASS). For TFS, a base weight (the inverse of the sampled teacher's probability of selection) was used as the starting point. Then, a weighting adjustment was applied that reflected the impact of the SASS teacher weighting procedure. Next, a nonresponse adjustment factor was calculated and applied using information known about the respondents from the sampling frame data. Finally, a ratio adjustment factor was calculated and applied to the sample to adjust the sample totals to frame totals in order to reduce sampling variability. The product of these factors was the final weight for TFS. See table 17 for a distribution of the final weights for the 2004–05 TFS.

Most of the steps in the weighting procedure employed weighting classes in the calculation of the weighting adjustments. Weighting classes partition the sample by key variables (such as race or age categories) and allow for differential adjustment factors to be computed for each step in the weighting procedure. This technique is especially useful when the computed factors are presumed to differ substantially, such as when patterns of nonresponse vary across subpopulations (such as by age or race). A description of how the final weight was computed as well as a brief description of each step in the weighting procedure is presented below. When computations were done within weighting classes (cells), such as nonresponse adjustments, the cells are described. Sometimes a cell did not have enough data to produce a reliable estimate; in such cases, cells were collapsed. The most important variables were always collapsed last. The collapsing criteria and the cells are described in exhibit 5.

The final TFS sample weight is the product of

(TFS base weight) and (TFS-to-SASS weighting adjustment factor) and (TFS noninterview adjustment) and (TFS ratio adjustment)

where:

TFS base weight is the inverse of the probability of selecting a teacher for TFS. This weight is the product of the SASS teacher base weight (described above) and TFS subsampling adjustment factor. The TFS subsampling adjustment factor is an adjustment that accounts for the subsampling of teachers from SASS sampled teachers. Thus, this base weight reflects the TFS probability of selection from all three stages of selection (i.e., SASS school sampling, SASS teacher sampling within school, and TFS sampling from SASS teachers).

The *TFS-to-SASS weighting adjustment factor* is used to adjust for the fact that the SASS teacher base weights were used in selecting the TFS sample, whereas the SASS final teacher weights are

more reflective of the teacher population.²⁴ The weighting adjustment factor adjusts for all stages of weighting that occurred between the base and final weighting calculations for SASS teachers. For more information about the SASS teacher weighting procedure, see *Documentation for the 2003–04 Schools and Staffing Survey* (Tourkin et al. 2007).

The *TFS noninterview adjustment* is the factor used to adjust for teachers who participated in the 2003–04 SASS and were selected and determined to be eligible for the 2004–05 TFS, but did not participate in TFS. It is the weighted (product of the base weight and TFS-to-SASS weighting adjustment factor) ratio of the total eligible in-scope teachers (i.e., interviewed teachers plus noninterviewed teachers) to the total responding in-scope teachers (i.e., interviewed teachers) within cells. Variables used to define cells are presented in exhibit 5.

TFS ratio adjustment is the factor used to adjust the TFS sample totals to SASS sample totals. This adjustment ensures that the weighted number of TFS teachers (including interviews, noninterviews, and out of scopes) will be consistent with the weighted number of teachers from the 2003–04 SASS. Since the teachers who were out of scope for TFS were included in the SASS numerators, they were included in the denominators for consistency. The TFS estimates resulting from this step will not be precisely equal to SASS estimates due to the small loss of SASS teachers from eligibility for TFS due to emigration or death.

The TFS ratio adjustment is equal to the ratio of the total number of SASS teachers not selected with certainty for TFS (i.e., those teachers not automatically included in the TFS sample as mentioned in chapter 3) to the weighted TFS sample estimate of the total number of noncertainty teachers within each weighting class, or cell, defined for this step in the weighting procedure. Certainty teachers (teachers automatically included in sample for TFS based on their stratum or their measure of size) were excluded from both the numerator and denominators and were assigned a factor equal to one. Variables used to define cells are presented in exhibit 5.

Table 17. Distribution of final weights, by data file: 2004–05

Data file	Mini- mum	Weight at given percentile									Maxi- mum	Mean
		1 st	5 th	10 th	25 th	50 th	75 th	90 th	95 th	99 th		
Former teacher	2.22	6.80	11.23	15.36	33.42	64.38	127.20	230.66	345.35	1,063.77	5,819.03	125.41
Current teacher	4.25	8.84	31.92	49.29	103.86	290.62	902.19	2,095.43	2,587.98	3,598.04	7,556.59	700.90

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Exhibit 5 presents the criteria for collapsing weighting classes, the definition of the weighting classes, and the collapsing ordering. Note that public charter school teachers and traditional public school teachers were adjusted separately from private school teachers. “Leavers” refer to former teachers, or teachers who left the K–12 teaching profession. “Movers” refer to teachers who moved to another school. “Stayers” refer to teachers who were still teaching at the same school as the previous year. New teachers were defined as teachers who had 3 or fewer years of teaching experience at the time of SASS (the previous year). The education (i.e., bachelor’s degree or less and master’s or more) and sex (male and female) categories were the same for each weighting class; but the age categories varied. The age categories were based on the distribution of the sampled teachers and designed to reduce the amount of collapsing within each weighting class. For example, the age categories used in the new public school leavers category (less

²⁴ SASS teacher weighting was not completed in time to use final teacher weights in the TFS sample selection, necessitating the use of the SASS teacher base weights in the TFS sampling.

than 24, 24–25, 26–27, 28–30, 31–34, 35–39, 40–46, 47–53, and 54 and older) were different from the age categories used in the new movers (less than 24, 24–25, 26–27, 28–30, 31–34, 35–41, and 42 and older). These age categories suggest that the new public school movers tend to be younger than the new public school leavers. The specific age categories for each weighting class are included in “Appendix I. Weighting Adjustment Cells.” Cells not meeting the collapsing criteria were collapsed with other cells according to the collapsing order. Thus, cells needing collapsing were initially collapsed with cells having all other variables in common, but with an adjacent age category.

Exhibit 5. Adjustment factors and collapsing criteria as applied to TFS weights: 2004–05

Type of teacher	Nonresponse adjustment factor		First-stage adjustment factor	
	Collapsing criteria	Collapsing order	Collapsing criteria	Collapsing order
Public school (including public charter) teachers				
New leavers	Factor ≤ 1.5	Education, sex, age	Factor $\geq .667$ and ≤ 1.5	Age, teaching assignment, ethnicity, sex
	Interviews ≥ 15		Interviews ≥ 15	
Experienced leavers	Factor ≤ 1.5		Factor $\geq .667$ and ≤ 1.5	
	Interviews ≥ 15		Interviews ≥ 15	
New movers	Factor ≤ 1.5		Factor $\geq .667$ and ≤ 1.5	
	Interviews ≥ 15		Interviews ≥ 15	
Experienced movers	Factor ≤ 1.5		Factor $\geq .667$ and ≤ 1.5	
	Interviews ≥ 15		Interviews ≥ 15	
New stayers	Factor ≤ 1.5		Factor $\geq .667$ and ≤ 1.5	
	Interviews ≥ 15		Interviews ≥ 15	
Experienced stayers	Factor ≤ 1.5		Factor $\geq .667$ and ≤ 1.5	
	Interviews ≥ 15		Interviews ≥ 15	
Private school teachers				
New leavers	Factor ≤ 1.5	Education, sex, age	Factor $\geq .667$ and ≤ 1.5	Age, teaching assignment, ethnicity, sex
	Interviews ≥ 15		Interviews ≥ 15	
Experienced leavers	Factor ≤ 1.5		Factor $\geq .667$ and ≤ 1.5	
	Interviews ≥ 15		Interviews ≥ 15	
New movers	Factor ≤ 1.5		Factor $\geq .667$ and ≤ 1.5	
	Interviews ≥ 15		Interviews ≥ 15	
Experienced movers	Factor ≤ 1.5		Factor $\geq .667$ and ≤ 1.5	
	Interviews ≥ 15		Interviews ≥ 15	
New stayers	Factor ≤ 1.5		Factor $\geq .667$ and ≤ 1.5	
	Interviews ≥ 15		Interviews ≥ 15	
Experienced stayers	Factor ≤ 1.5		Factor $\geq .667$ and ≤ 1.5	
	Interviews ≥ 15		Interviews ≥ 15	

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), 2004–05.

Variance Estimation

In surveys with complex sample designs, such as SASS or TFS, direct estimates of sampling errors that assume a simple random sample will typically underestimate the variability in the estimates. The SASS sampling design and estimation included procedures that deviated from the assumption of simple random sampling, such as stratifying the school sample, oversampling new school teachers, and sampling with differential probabilities.

The preferred method of calculating sampling errors to reflect these aspects of the complex sample design of SASS is replication. Replication methods involve constructing a number of subsamples (i.e., replicates) from the full sample and computing the statistic of interest for each replicate. The mean square error of

the replicate estimates around the full sample estimate provides an estimate of the variance of the statistic. The replicate weights are used to compute the variance of a statistic, Y , as given below:

$$\text{Variance } (Y) = \left(\frac{1}{n}\right) \sum_r (Y_r - Y)^2$$

where: Y_r = the estimate of Y using the r^{th} set of replicate weights; and
 n = the number of replicates.

The SASS surveys completed before 1993 used a procedure known as balanced repeated replication (BRR) for the calculation of sampling variance. BRR assumes sampling is done with replacement, and hence, BRR does not reflect the increase in precision due to sampling a high proportion of a finite population (termed the finite population correction, or FPC). For most surveys, where the sampling rates are low, the increase in precision will be small and can safely be disregarded. However, in SASS, the public sector surveys (i.e., school, principal, school district, teacher, and library media center) are designed to produce reliable state estimates. This necessarily implies high sampling rates, which can lead to very large overestimates of variance with BRR. Likewise, the private sector surveys (i.e., school, principal, and teacher) are designed to produce detailed affiliation estimates, which also imply high sampling rates and subsequent overestimation of variance with BRR.

It is possible to adjust BRR to include a finite population correction. However, since SASS uses a probability proportional to size systematic selection procedure (described in chapter 4 of *Documentation for the 2003–04 Schools and Staffing Survey* [Tourkin et al. 2007]), it is not clear what the appropriate FPC would be. It is even possible for an appropriate FPC to be greater than one, which conventional methods of variance estimation are not equipped to handle. (See Kaufman 2001.)

To overcome this limitation, a bootstrap variance estimator, which estimates the variance by simulating the sampling procedure (described in Kaufman 2001) was implemented for the 1993–94 SASS and its role was expanded in 1999–2000 and even more so in the 2003–04 SASS. The bootstrap variance estimator was used for public schools, most private schools, and public school districts in 1993–94. (See chapter 9 in *Documentation for the 2003–04 Schools and Staffing Survey* [Tourkin et al. 2007].) In 1999–2000, an additional bootstrap estimator was also included for public schools and most private schools. The bootstrap estimator used in the 2003–04 SASS was modified from the 1999–2000 estimator to make it more stable. In the 2003–04 SASS a new bootstrap estimator for both public and private school teachers was included. The bootstrap variance reflects the increase in precision due to large sampling rates because the bootstrap sampling is done systematically, without replacement, as was the original sampling.

Public schools, public school teachers, private schools sampled from the list frame, and private school teachers from schools sampled from the list frame were calculated using the updated bootstrap system. This system is based on a series of assumptions about the sampling design:

- 1) The traditional systematic probability proportional to size first-stage sample can be approximated using a randomized systematic sample.
- 2) The stratified equal probability systematic sample can be approximated by a stratified, without replacement, simple random sample.

Using these assumptions, the bootstrap replicate weights were computed from a single sample. Again, the appropriate bootstrap replicate base weights (inverse of the probability of selection) generated for the sample were subsequently reweighted by processing each set of replicate basic weights through the weighting procedure.

Since the number of certainty schools (i.e., schools guaranteed selection) was substantial, it was desirable to address the variance that results from nonresponse. Therefore, it was decided to treat nonresponse as a stage of sample selection. For certainty schools, this allowed for the reflection of a variance component that otherwise would be regarded as a bias. The nonresponse sampling model was as follows:

- For noncertainty schools, nonresponse was considered a nested random process within selected primary sampling units. That is, school nonresponse was assumed to be a random process within the random sample. Within appropriately defined cells (weighting classes), it was assumed nonresponse followed a “missing-at-random process.”
- For certainty schools, nonresponse was considered the first stage of selection. It was assumed that this process followed a simple random sample without replacement model within appropriately defined cells. The frame size for this selection was assumed to be the number of selected certainty schools in the cell and the sample size was the number of responding certainty schools in the cell.

This procedure also allowed for correctly estimating variances for school-based estimates that used school teacher averages generated from the 2003–04 SASS teacher files.

To be consistent with the bootstrap procedures described above, the nonresponse modeling of certainty schools was reflected through an appropriately defined bootstrap procedure. For more details on the bootstrap methodology and how it applies to SASS, see Efron (1982), Kaufman (1992, 1993, 1994, 1998, 2001, 2002, 2003, and 2004), and Sitter (1990).

The newest version of the bootstrap procedure made it possible to compute teacher bootstrap replicate weights at the same time as the school weights, considerably reducing the processing time to form the replicates.

Each SASS data file includes a set of 88 replicate weights designed to produce variance estimates. Replicate weights were created for each of the 88 samples using the same estimation procedures used for the full sample and are included in the data files. Most of the replicate weights were produced using a bootstrap procedure. For TFS, the replicate weights were derived based on the SASS teacher replicate weights, making appropriate adjustments for the TFS sampling procedure.

As described above, the replicate weights are used to compute the variance of a statistic, Y , as given below.

$$\text{Variance } (Y) = \left(\frac{1}{88} \right) \sum_{r=1} (Y_r - Y)^2$$

where: Y_r = the estimate of Y using the r^{th} set of replicate weights, and the number of replicate weights is 88 for SASS and TFS.

Analysis of the bootstrap replicate weights revealed that approximately 3 percent of the school (public and private) and teacher (public and private) weights fell outside a 95 percent confidence interval. These were nearly the expected 5 percent, indicating the bootstrap replicate weights were close to being normally distributed. Since the TFS replicate weights were based on the SASS teacher replicate weights, the same distribution applied.

TFS Teachers. Since the TFS sample was a proper subsample of the SASS teacher sample (i.e., TFS is representative of the whole SASS teacher sample), the SASS teacher replicates were used for the TFS sample. The TFS base weight for each TFS teacher was multiplied by each of the 88 SASS replicate

weights divided by the SASS teacher full-sample base weight for that teacher. To calculate 88 replicate weights, which should be used for variance calculations, these TFS replicate basic weights were processed through the remainder of the TFS weighting system. The replicate weights for TFS teachers are TFRPWT1 through TFRPWT88.

The SASS teacher replicate weights were generated at the same time as the school replicate weights as part of the 2003–04 bootstrap system. BRR methodology was employed rather than bootstrap if a teacher was in the private school area frame. Teacher records were assigned replicate weights by multiplying the school BRR replicate weight times the teacher’s conditional probability of selection given the school was selected in the SASS school sample.

A variance estimate was obtained by first calculating the estimate for each replicate, then summing the squared deviations of the replicate estimates from the full-sample estimate, and finally dividing by the number of replicates:

$$\sum_{k=1}^{88} (\hat{y}_k - \hat{y})^2 / 88$$

where $k = 1, 2, \dots, 88$;
 $y_k = k^{\text{th}}$ replicate estimate; and
 $y =$ full sample estimate.

When calculating variance estimates for some small subdomains of interest (e.g., vocational education teachers), sparseness of the data may result in there being no data for some replicates. This can result in either an extremely large variance estimate or failure of the software used to calculate the variance, with possibly a warning message.

The computation of sampling errors for either TFS or SASS data using these replicate weights can be done easily with one of the following software programs: WesVar Complex Sample Software, SUDAAN (Research Triangle Institute 2001), AM Statistical Software, or STATA 9.

- *WesVar*. The user needs to create a new WesVar data file by specifying the full sample weight variable and the replicate weight variables as defined above, and the replication method, BRR. The replicate weights and the full sample weight can be highlighted and dragged to their appropriate place on the “New WesVar Data File” window. For more information, visit www.westat.com/wesvar/.
- *SUDAAN*. The user needs to specify the sample design as a “Balanced Repeated replication” design as well as the replicate weight variables. Specifying the sample design (DESIGN = BRR) is done in the procedure call statement (i.e., PROC DESCRIPT DESIGN = BRR;). The specification of the replicate weights is done with the REPWGT statement (i.e., to produce the sampling errors for estimates from TFS data files use the statement: REPWGT TFRPWT1-TFRPWT88;). For more information, visit www.rti.org/sudaan/.
- *AM*. The user needs to set the replicate weights along with the replication method using the right-click context menu in the variable list window. Once the “Set Replicate Weights” window is displayed, the replicate weights as identified above can be highlighted and dragged into the window. At the bottom of the window are four options for replication method; BRR should be selected. For more information, visit <http://am.air.org/>.
- *STATA*. The use of replicate weights for the generation of standard errors is a new feature to STATA 9. First, the user needs to survey set the data (SVY SET) by defining the probability weight ([pw =]), balanced repeated replication weights (brrweight(varlist)), variance estimation

type ((vce(brr)), and turn on the mse formula (mse). Once these parameters are set, users can call up the survey settings and tell STATA which type of standard errors to produce using the SVY BRR command. SVY BRR also allows users to specify the statistics to be collected (exp_list) and the command to perform (e.g., mean or tab). For more information visit <http://www.stata.com/>.

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Chapter 9. Reviewing the Quality of TFS Data

National Center for Education Statistics (NCES) program staff members have the responsibility of ensuring that data files are acceptable for public release. Before files are released to the public, staff members review the data for errors associated with the edit, imputation, and weighting programs. This review incorporates a number of checks including univariate, bivariate, and multivariate analyses that rigorously examine as many aspects of the data as possible without delaying timely release of Teacher Follow-up Survey (TFS) datasets.

Below are aspects of the datasets that were reviewed:

- general data quality;
- nonresponse;
- weighting; and
- external data checks, including an examination of response variance.

General Data Quality

General data quality included a number of reviews that could be characterized as consistency edits. These checks involved an examination of the individual responses, patterns of response, and summary statistics for variables and files to ensure consistency within items, respondents, and files. In addition, key variables and crosstabulations of key variables were examined for distributions and relationships that were expected based upon prior administrations and other research to check the data's face validity. The specific data checks included:

- *Edits.* The validity of the skip patterns in each TFS questionnaire was established during the processing of the data; that is, U.S. Census Bureau analysts verified that each item in each questionnaire had the number of responses it should have if skip instructions were followed correctly. Quality checks on the edit specifications were performed and resulted in some corrections (which were treated as a form of imputation).
- *Frequency counts.* Unweighted record counts for every variable were examined from the restricted-use data files. Variables with out-of-range values or inconsistent values were identified, and these values were corrected.
- *Reasonableness of data.* Univariate, bivariate, and multivariate tabulations of key survey variables were obtained and compared to estimates from the previous TFS survey. Tabulations were reviewed to determine whether the basic relationships observed were within reasonable bounds, allowing for elements of change (such as random fluctuations in variance, or a trend such as overall population growth in a state). The distributions and relationships observed were consistent with expectations.

Nonresponse

Response rates were examined for possible bias, and no evidence of bias at the unit or item level was found. The details of this analysis are discussed in greater detail in chapter 5, but the nonresponse analysis included a detailed analysis of unit nonresponse and item nonresponse.

- *Unit nonresponse.* Response rates were calculated by sector and current or former teacher status and for selected reporting characteristics. (See chapter 5 for unit response rate information.) No evidence of substantial bias was found.

- *Item nonresponse.* The extent of item nonresponse for each TFS data file was determined. (See chapter 5 for item response rate information.) Items with high nonresponse rates were identified and reported in tables. Following this review, no items were removed from the data files. However, items with a response rate lower than 70 percent are footnoted as such in published tables.

Weighting

The weighting review consisted of reviewing the distribution of TFS replicate weights. The following was done:

- For each replicate, the weights were totaled. Each replicate total, as well as the average of those numbers, was checked against the full-sample estimate. The standard errors of the replicate totals were computed and checked for reasonableness.
- A check was performed to verify that 95 percent of the replicate weights were contained in an appropriately computed 95 percent confidence interval. This was done with both the basic replicate weights and the final replicate weights.

External Data Checks

One way to verify the external validity of TFS data was to compare the total number of teachers in the 2004–05 TFS to the total number of teachers in the 2003–04 Schools and Staffing Survey (SASS). The ratio of teachers in TFS to teachers in SASS indicates whether TFS population totals were within reasonable bounds of the SASS population totals since the magnitude of the sampling error relates directly to sample size and the percentage of the universe covered by that sample.

The following three tables compare the number of TFS teachers to SASS teachers within all three school types (i.e., traditional public, public charter, and private schools) and by selected SASS teacher and school characteristics. Table 18 compares the overall number of stayer and non-stayer (i.e., movers and leavers) teachers in TFS to the total number of teachers in SASS. Table 19 compares the number of TFS teachers to the number of SASS teachers in public and private schools, and table 20 compares the number of TFS teachers to the number of SASS teachers in traditional public and public charter schools.

Table 18. Comparison of number of stayer and nonstayer teachers (both sectors) in 2004–05 TFS population to teachers in 2003–04 SASS, by TFS sampling strata and selected SASS teacher and school characteristics: 2003–04 and 2004–05

TFS sampling strata and selected SASS teacher and school characteristics	Number of stayer teachers in TFS	Number of nonstayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS
Total	3,058,779	621,427	3,680,206	3,717,998	99.0
TFS sampling strata					
TFS status					
Leaver or mover	37,343	313,689	351,031	345,838	101.5
Stayer	3,007,676	106,959	3,114,636	3,154,368	98.7
Don't know	13,760	200,779	214,539	217,792	98.5
Teaching level in SASS year					
Elementary	1,622,634	344,906	1,967,540	1,979,869	99.4
Secondary	1,436,145	276,521	1,712,666	1,738,129	98.5
Teaching experience in SASS					
Three or fewer years	512,085	161,478	673,563	618,630	108.9
More than 3 years	2,546,693	459,949	3,006,643	3,099,368	97.0
SASS teacher characteristics					
Main teaching assignment					
Early childhood/general elementary	1,094,331	207,145	1,301,476	1,305,043	99.7
Special education	341,864	93,440	435,304	432,744	100.6
Arts/music	193,261	38,146	231,407	251,385	92.1
English /language arts	306,854	63,130	369,983	385,428	96.0
ESL/bilingual education	30,857	5,741	36,598	44,480	82.3
Foreign languages	88,128	19,556	107,684	108,085	99.6
Health/physical education	178,596	31,811	210,407	197,479	106.5
Mathematics	233,592	42,759	276,351	267,592	103.3
Natural science	217,366	29,984	247,350	240,427	102.9
Social sciences	183,561	32,060	215,620	219,479	98.2
Vocational/technical education	139,005	33,508	172,513	182,290	94.6
Other	51,366	24,147	75,512	83,568	90.4
Sex					
Male	742,266	146,496	888,762	922,749	96.3
Female	2,316,513	474,931	2,791,444	2,795,249	99.9
Race/ethnicity					
White, non-Hispanic	2,623,847	516,341	3,140,188	3,113,249	100.9
Black, non-Hispanic	203,716	55,594	259,310	276,275	93.9
Hispanic	123,118	31,837	154,956	225,019	68.9
Asian, non-Hispanic	45,864	9,305	55,168	50,703	108.8
Native Hawaiian/Pacific Islander, non-Hispanic	6,479	1,036	7,515	6,913	108.7
American Indian/Alaska Native, non-Hispanic	24,862	2,699	27,561	18,916	145.7
More than one race, non-Hispanic	22,708	3,377	26,085	17,933	145.5

See notes at end of table.

Table 18. Comparison of number of stayer and nonstayer teachers (both sectors) in 2004–05 TFS population to teachers in 2003–04 SASS, by TFS sampling strata and selected SASS teacher and school characteristics: 2003–04 and 2004–05—Continued

TFS sampling strata and selected SASS teacher and school characteristics	Number of stayer teachers in TFS	Number of nonstayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS
SASS teacher characteristics—Continued					
Age					
Less than 25	147,646	42,850	190,496	155,439	122.6
25–29	365,241	126,293	491,533	473,060	103.9
30–39	730,162	141,414	871,576	900,304	96.8
40–49	838,071	122,541	960,612	959,146	100.2
50–59	863,010	144,116	1,007,126	1,062,268	94.8
60–64	87,122	35,461	122,582	130,647	93.8
65 or more	27,527	8,753	36,280	37,135	97.7
Highest degree earned					
Associate's or no degree	57,819	21,021	78,840	78,439	100.5
Bachelor's	1,570,739	328,514	1,899,253	1,910,663	99.4
Master's	1,249,945	219,322	1,469,267	1,468,290	100.1
Education specialist or certificate of advanced graduate studies	154,585	45,062	199,646	211,788	94.3
Doctorate or professional	25,691	7,508	33,199	48,817	68.0
Total school income					
Less than \$35,000	871,944	238,877	1,110,821	1,064,979	104.3
\$35,000–\$49,999	1,282,239	238,835	1,521,073	1,546,997	98.3
\$50,000–\$74,999	810,588	122,497	933,085	977,858	95.4
\$75,000–\$99,999	85,447	19,080	104,527	118,664	88.1
\$100,000 or more	8,560	2,139	10,699	9,500	112.6
SASS school characteristics					
Minority enrollment					
Less than 10 percent	981,907	161,668	1,143,576	1,071,472	106.7
10–35 percent	833,078	152,787	985,865	1,030,074	95.7
More than 35 percent	1,243,793	306,972	1,550,765	1,616,452	95.9
Census region					
Northeast	623,030	118,755	741,785	787,071	94.2
Midwest	754,749	151,040	905,789	874,744	103.5
South	1,140,325	226,054	1,366,379	1,367,920	99.9
West	540,675	125,579	666,253	688,263	96.8
Community type					
Central city	826,598	204,352	1,030,950	1,111,660	92.7
Urban fringe/large town	1,675,231	314,028	1,989,259	1,939,920	102.5
Rural/small town	556,949	103,047	659,996	666,419	99.0
School enrollment					
Fewer than 200	248,824	77,618	326,442	345,746	94.4
200–499	954,004	205,944	1,159,948	1,149,302	100.9
500–749	745,574	133,153	878,727	905,747	97.0
750–999	410,318	75,778	486,096	500,582	97.1
1,000 or more	700,058	128,934	828,992	816,622	101.5

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public Teacher and Private Teacher Data Files," 2003–04, and Teacher Follow-up Survey (TFS), "Final TFS Documentation Data Files and TFS Sample File," 2004–05.

Ninety-nine percent of the total weighted estimate of teachers in SASS is represented by the TFS sample across all school types (i.e., traditional public, public charter, and private school teachers) (table 18). For public school teachers, 98.9 percent of the SASS population estimate is captured by TFS, and for private school teachers 99.6 percent is captured (table 19).

Table 19. Comparison of number of public and private sector school stayer and nonstayer teachers in 2004–05 TFS population to teachers in 2003–04 SASS, by TFS sampling strata and selected SASS teacher and school characteristics: 2003–04 and 2004–05

TFS sampling strata and selected SASS teacher and school characteristics	Public sector (as identified in SASS)				Ratio of total number of teachers in TFS to total in SASS	Private sector (as identified in SASS)				Ratio of total number of teachers in TFS to total in SASS
	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS		Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	
Total	2,684,202	530,690	3,214,893	3,250,625	98.9	374,576	90,737	465,313	467,373	99.6
TFS sampling strata										
TFS status										
Leaver or mover	33,661	277,449	311,110	305,888	101.7	3,682	36,240	39,922	39,950	99.9
Stayer	2,638,061	92,426	2,730,487	2,769,522	98.6	369,615	14,534	384,149	384,846	99.8
Don't know	12,481	160,816	173,297	175,215	98.9	1,279	39,963	41,242	42,577	96.9
Teaching level in SASS year										
Elementary	1,410,247	288,549	1,698,796	1,716,404	99.0	212,387	56,357	268,744	263,465	102.0
Secondary	1,273,955	242,142	1,516,097	1,534,220	98.8	162,189	34,380	196,569	203,908	96.4
Teaching experience in SASS										
Three or fewer years	434,025	127,757	561,781	513,772	109.3	78,061	33,721	111,782	104,858	106.6
More than 3 years	2,250,178	402,934	2,653,111	2,736,852	96.9	296,516	57,016	353,531	362,516	97.5
SASS teacher characteristics										
Main teaching assignment										
Early childhood/ general elementary	953,605	174,305	1,127,911	1,131,010	99.7	140,726	32,840	173,565	174,033	99.7
Special education	325,552	87,153	412,705	414,195	99.6	16,311	6,288	22,599	18,548	121.8
Arts/music	163,661	29,622	193,283	212,606	90.9	29,600	8,524	38,124	38,779	98.3
English/language arts	268,981	54,320	323,301	339,518	95.2	37,873	8,809	46,683	45,910	101.7
ESL/bilingual education	29,772	5,609	35,381	43,190	81.9	1,085	132	1,217	1,290	94.4
Foreign languages	70,219	13,813	84,032	81,490	103.1	17,909	5,743	23,652	26,595	88.9
Health/physical education	158,510	27,486	185,996	174,808	106.4	20,086	4,324	24,411	22,671	107.7
Mathematics	201,428	36,556	237,984	231,115	103.0	32,164	6,202	38,366	36,477	105.2
Natural science	189,320	24,639	213,959	208,140	102.8	28,046	5,345	33,391	32,287	103.4
Social sciences	160,720	27,003	187,724	189,235	99.2	22,840	5,056	27,897	30,243	92.2
Vocational/technical education	133,070	31,638	164,708	175,120	94.1	5,935	1,870	7,805	7,170	108.9
Other	29,364	18,544	47,908	50,198	95.4	22,002	5,602	27,604	33,370	82.7
Sex										
Male	657,669	126,057	783,726	812,533	96.5	84,597	20,439	105,036	110,216	95.3
Female	2,026,533	404,634	2,431,167	2,438,092	99.7	289,980	70,297	360,277	357,158	100.9

See notes at end of table.

Table 19. Comparison of number of public and private sector school stayer and nonstayer teachers in 2004–05 TFS population to teachers in 2003–04 SASS, by TFS sampling strata and selected SASS teacher and school characteristics: 2003–04 and 2004–05—Continued

TFS sampling strata and selected SASS teacher and school characteristics	Public sector (as identified in SASS)					Private sector (as identified in SASS)				
	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS
SASS teacher characteristics—										
Continued										
Race/ethnicity										
White, non-Hispanic	2,287,806	439,083	2,726,889	2,701,752	100.9	336,040	77,258	413,298	411,497	100.4
Black, non-Hispanic	192,299	50,164	242,463	257,484	94.2	11,417	5,430	16,847	18,792	89.7
Hispanic	111,052	26,744	137,795	202,463	68.1	12,067	5,094	17,160	22,556	76.1
Asian, non-Hispanic	35,062	8,031	43,092	42,167	102.2	10,802	1,274	12,076	8,536	141.5
Native Hawaiian/ Pacific Islander, non-Hispanic	5,236	933	6,169	5,969	103.3	1,243	103	1,346	943	142.7
American Indian/ Alaska Native, non-Hispanic	22,997	1,715	24,712	16,857	146.6	1,865	984	2,849	2,059	138.3
More than one race, non-Hispanic	22,203	2,991	25,194	16,322	154.4	505	386	891	1,612	55.3
Age										
Less than 25	127,357	32,880	160,237	126,549	126.6	20,289	9,969	30,259	28,889	104.7
25–29	325,044	107,917	432,961	413,766	104.6	40,196	18,376	58,572	59,293	98.8
30–39	644,979	120,940	765,919	797,714	96.0	85,183	20,474	105,657	102,590	103.0
40–49	742,315	104,672	846,988	840,342	100.8	95,756	17,869	113,625	118,804	95.6
50–59	758,511	129,139	887,650	941,650	94.3	104,499	14,977	119,476	120,618	99.1
60–64	67,312	29,614	96,926	105,364	92.0	19,809	5,846	25,656	25,283	101.5
65 or more	18,684	5,528	24,212	25,239	95.9	8,843	3,225	12,068	11,896	101.4
Highest degree earned										
Associate's or no degree	29,521	10,212	39,734	35,241	112.8	28,298	10,809	39,107	43,199	90.5
Bachelor's	1,351,664	276,254	1,627,919	1,651,425	98.6	219,074	52,260	271,335	259,238	104.7
Master's	1,141,534	196,885	1,338,419	1,330,642	100.6	108,412	22,436	130,848	137,649	95.1
Education specialist or certificate of advanced graduate studies	146,121	41,737	187,858	194,993	96.3	8,464	3,324	11,788	16,795	70.2
Doctorate or professional	15,362	5,601	20,963	38,325	54.7	10,329	1,906	12,235	10,493	116.6
Total school income										
Less than \$35,000	648,240	163,553	811,793	756,374	107.3	223,704	75,323	299,028	308,606	96.9
\$35,000–\$49,999	1,176,840	225,654	1,402,493	1,432,828	97.9	105,399	13,181	118,580	114,169	103.9
\$50,000–\$74,999	768,561	120,369	888,930	937,269	94.8	42,028	2,128	44,156	40,588	108.8
\$75,000–\$99,999	82,229	19,020	101,250	115,018	88.0	3,218	59	3,277	3,646	89.9
\$100,000 or more	8,333	2,094	10,427	9,136	114.1	228	45	273	365	74.9

See notes at end of table.

Table 19. Comparison of number of public and private sector school stayer and nonstayer teachers in 2004–05 TFS population to teachers in 2003–04 SASS, by TFS sampling strata and selected SASS teacher and school characteristics: 2003–04 and 2004–05—Continued

TFS sampling strata and selected SASS teacher and school characteristics	Public sector (as identified in SASS)					Private sector (as identified in SASS)				
	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS
SASS school characteristics										
Minority enrollment										
Less than 10 percent	800,287	126,394	926,681	868,756	106.7	181,620	35,274	216,895	202,715	107.0
10–35 percent	698,645	118,720	817,365	853,818	95.7	134,433	34,067	168,500	176,256	95.6
More than 35 percent	1,185,270	285,577	1,470,847	1,528,050	96.3	58,523	21,395	79,918	88,402	90.4
Census region										
Northeast	520,291	97,565	617,856	662,348	93.3	102,739	21,190	123,929	124,723	99.4
Midwest	666,738	130,042	796,779	768,491	103.7	88,012	20,998	109,010	106,253	102.6
South	1,017,142	192,719	1,209,861	1,214,670	99.6	123,183	33,335	156,518	153,251	102.1
West	480,031	110,365	590,396	605,117	97.6	60,643	15,214	75,857	83,146	91.2
Community type										
Central city	680,843	172,502	853,345	929,391	91.8	145,756	31,850	177,605	182,269	97.4
Urban fringe/large town	1,481,358	266,197	1,747,555	1,704,231	102.5	193,873	47,831	241,704	235,689	102.6
Rural/small town	522,002	91,991	613,993	617,003	99.5	34,948	11,056	46,003	49,416	93.1
School enrollment										
Fewer than 200	117,491	28,791	146,282	167,473	87.3	131,333	48,827	180,160	178,273	101.1
200–499	814,215	175,904	990,118	978,881	101.1	139,789	30,040	169,830	170,420	99.7
500–749	703,942	126,527	830,469	850,272	97.7	41,632	6,626	48,258	55,475	87.0
750–999	373,228	72,741	445,969	466,332	95.6	37,091	3,036	40,127	34,250	117.2
1,000 or more	675,327	126,727	802,054	787,667	101.8	24,731	2,207	26,938	28,955	93.0

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public Teacher and Private Teacher Data Files,” 2003–04, and Teacher Follow-up Survey (TFS), “Final TFS Documentation Data Files and TFS Sample File,” 2004–05.

Comparisons were made by TFS sampling strata as well as by selected SASS teacher and school characteristics. These identified a few areas where the TFS population differed from the SASS population (tables 19 and 20). The TFS sample of public school teachers (including public charter) contained a larger proportion of non-Hispanic American Indian/Alaska Native and non-Hispanic multirace racial/ethnic groups and a smaller proportion of teachers who were Hispanic and teachers who had doctorate or professional degrees (table 19). Comparisons of private school teachers revealed a larger proportion of non-Hispanic Asian, non-Hispanic Native Hawaiian/Pacific Islander, and non-Hispanic American Indian/Alaska Native racial/ethnic groups and a smaller proportion of the non-Hispanic multirace racial/ethnic group (table 19). Among only public charter school teachers who participated in TFS, there was a larger proportion of the non-Hispanic American Indian/Alaska Native racial/ethnic group and teachers whose total school income was in the range of \$75,000 to \$99,999. There was a smaller proportion of public charter school teachers who were 60 to 64 years old, had doctorate or professional degrees, and whose total school income was in the range of \$50,000 to \$74,999 (table 20).

These imbalances are not unusual since TFS only controls for status (stayers, movers, leavers, and unknown), within school type (traditional public, public charter, and private), experience groups (new/experienced), teacher’s grade level (elementary/middle/secondary), and minority status (minority/nonminority). The uncontrolled variables tend to have high variances and produce random fluctuations.

Table 20. Comparison of number of traditional public and public charter school stayer and nonstayer teachers in 2004–05 TFS population to teachers in 2003–04 SASS, by TFS sampling strata and selected SASS teacher and school characteristics: 2003–04 and 2004–05

TFS sampling strata and selected SASS teacher and school characteristics	Traditional public (as identified in SASS)					Public charter (as identified in SASS)				
	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS
Total	2,654,960	518,461	3,173,421	3,208,486	98.9	29,242	12,229	41,472	42,139	98.4
TFS sampling strata										
TFS status										
Leaver or mover	33,450	273,020	306,470	301,374	101.7	211	4,428	4,639	4,514	102.8
Stayer	2,609,380	90,794	2,700,174	2,738,194	98.6	28,681	1,631	30,312	31,328	96.8
Don’t know	12,130	154,646	166,776	168,917	98.7	351	6,170	6,520	6,297	103.5
Teaching level in SASS year										
Elementary	1,390,913	282,023	1,672,936	1,691,179	98.9	19,334	6,526	25,860	25,225	102.5
Secondary	1,264,047	236,438	1,500,485	1,517,307	98.9	9,908	5,704	15,612	16,913	92.3
Teaching experience in SASS										
Three or fewer years	424,182	122,475	546,657	498,284	109.7	9,843	5,281	15,124	15,488	97.6
More than 3 years	2,230,778	395,986	2,626,764	2,710,202	96.9	19,400	6,948	26,348	26,650	98.9
SASS teacher characteristics										
Main teaching assignment										
Early childhood/general elementary	940,582	169,674	1,110,256	1,113,193	99.7	13,024	4,631	17,655	17,817	99.1
Special education	322,569	86,236	408,804	410,862	99.5	2,984	917	3,901	3,334	117.0
Arts/music	162,007	28,428	190,435	209,967	90.7	1,654	1,195	2,849	2,638	108.0
English/language arts	266,086	53,408	319,494	335,588	95.2	2,894	912	3,807	3,930	96.9
ESL/bilingual education	29,515	5,577	35,092	42,852	81.9	257	32	289	338	85.6
Foreign languages	69,212	13,065	82,277	79,995	102.9	1,007	748	1,754	1,495	117.3
Health/physical educ.	158,105	27,214	185,319	173,031	107.1	405	272	677	1,777	38.1
Mathematics	199,288	35,673	234,961	227,810	103.1	2,140	883	3,023	3,304	91.5
Natural science	187,765	23,908	211,673	205,781	102.9	1,555	732	2,286	2,359	96.9
Social sciences	158,198	26,119	184,317	186,632	98.8	2,522	884	3,407	2,604	130.9
Vocational/technical education	133,070	31,081	164,151	174,006	94.3	0	558	558	1,114	50.1
Other	28,563	18,079	46,643	48,769	95.6	801	465	1,266	1,429	88.6
Sex										
Male	650,605	121,974	772,579	801,148	96.4	7,064	4,083	11,147	11,385	97.9
Female	2,004,355	396,487	2,400,841	2,407,338	99.7	22,178	8,147	30,325	30,753	98.6

See notes at end of table.

Table 20. Comparison of number of traditional public and public charter school stayer and nonstayer teachers in 2004–05 TFS population to teachers in 2003–04 SASS, by TFS sampling strata and selected SASS teacher and school characteristics: 2003–04 and 2004–05—Continued

TFS sampling strata and selected school and teacher characteristics	Traditional public (as identified in SASS)					Public charter (as identified in SASS)				
	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS
SASS teacher characteristics—										
Continued										
Race/ethnicity										
White, non-Hispanic	2,266,555	430,780	2,697,335	2,672,192	100.9	21,251	8,303	29,554	29,560	100.0
Black, non-Hispanic	187,963	48,427	236,389	251,079	94.1	4,336	1,737	6,074	6,404	94.8
Hispanic	108,428	25,432	133,860	198,188	67.5	2,623	1,312	3,935	4,275	92.0
Asian, non-Hispanic	34,347	7,887	42,234	41,364	102.1	715	144	859	802	107.0
Native Hawaiian/Pacific Islander, non-Hispanic	5,236	823	6,060	5,820	104.1	0	109	109	150	72.8
American Indian/Alaska Native, non-Hispanic	22,730	1,474	24,204	16,489	146.8	267	241	508	368	137.9
More than one race, non-Hispanic	22,203	2,649	24,851	15,969	155.6	0	342	342	352	97.1
Age										
Less than 25	125,839	31,528	157,367	123,718	127.2	1,518	1,353	2,870	2,831	101.4
25–29	319,347	105,221	424,569	404,367	105.0	5,697	2,696	8,392	9,399	89.3
30–39	634,374	116,774	751,148	784,087	95.8	10,605	4,166	14,772	13,627	108.4
40–49	736,051	103,084	839,135	832,467	100.8	6,265	1,588	7,853	7,875	99.7
50–59	753,672	127,096	880,769	934,422	94.3	4,839	2,043	6,881	7,227	95.2
60–64	67,312	29,316	96,628	104,585	92.4	0	298	298	779	38.2
65 or more	18,364	5,442	23,806	24,840	95.8	319	86	405	399	101.5
Highest degree earned										
Associate's or no degree	28,853	9,659	38,512	33,878	113.7	668	553	1,221	1,362	89.6
Bachelor's	1,333,170	269,000	1,602,170	1,624,390	98.6	18,494	7,254	25,748	27,035	95.2
Master's	1,132,753	193,383	1,326,135	1,319,103	100.5	8,781	3,503	12,284	11,539	106.5
Education specialist or certificate of advanced graduate studies	144,878	41,063	185,941	193,236	96.2	1,242	675	1,917	1,757	109.1
Doctorate or professional	15,305	5,356	20,662	37,879	54.5	57	245	302	446	67.7
Total school income										
Less than \$35,000	636,876	156,288	793,165	736,836	107.6	11,364	7,265	18,629	19,538	95.3
\$35,000–\$49,999	1,162,417	221,556	1,383,973	1,415,783	97.8	14,423	4,097	18,520	17,044	108.7
\$50,000–\$74,999	765,881	119,502	885,383	931,934	95.0	2,680	867	3,547	5,335	66.5
\$75,000–\$99,999	81,453	19,020	100,473	114,797	87.5	776	0	776	221	350.9
\$100,000 or more	8,333	2,094	10,427	9,136	114.1	0	0	0	0	0.0

See notes at end of table.

Table 20. Comparison of number of traditional public and public charter school stayer and nonstayer teachers in 2004–05 TFS population to teachers in 2003–04 SASS, by TFS sampling strata and selected SASS teacher and school characteristics: 2003–04 and 2004–05—Continued

TFS sampling strata and selected school and teacher characteristics	Traditional public (as identified in SASS)					Public charter (as identified in SASS)				
	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS	Number of stayer teachers in TFS	Number of non-stayer teachers in TFS	Total number of teachers in TFS	Total number of teachers in SASS	Ratio of total number of teachers in TFS to total in SASS
SASS school characteristics										
Minority enrollment										
Less than 10 percent	796,938	125,183	922,121	864,360	106.7	3,350	1,210	4,560	4,396	103.7
10–35 percent	691,510	114,872	806,382	842,362	95.7	7,135	3,848	10,983	11,456	95.9
More than 35 percent	1,166,512	278,405	1,444,918	1,501,764	96.2	18,758	7,171	25,929	26,286	98.6
Census region										
Northeast	512,717	95,686	608,403	654,940	92.9	7,574	1,879	9,454	7,408	127.6
Midwest	659,220	127,089	786,309	758,386	103.7	7,517	2,953	10,470	10,105	103.6
South	1,012,086	189,256	1,201,343	1,204,104	99.8	5,056	3,462	8,518	10,566	80.6
West	470,937	106,430	577,366	591,057	97.7	9,095	3,935	13,030	14,060	92.7
Community type										
Central city	666,000	165,665	831,665	906,496	91.7	14,843	6,837	21,680	22,895	94.7
Urban fringe/large town	1,470,339	261,959	1,732,299	1,688,535	102.6	11,019	4,237	15,256	15,696	97.2
Rural/small town	518,621	90,836	609,457	613,456	99.3	3,381	1,155	4,536	3,547	127.9
School enrollment										
Fewer than 200	112,333	25,054	137,386	157,615	87.2	5,158	3,738	8,896	9,858	90.2
200–499	804,073	170,407	974,480	963,866	101.1	10,142	5,497	15,638	15,015	104.1
500–749	697,807	125,500	823,307	842,581	97.7	6,135	1,027	7,163	7,690	93.1
750–999	369,552	71,691	441,243	462,013	95.5	3,675	1,050	4,726	4,319	109.4
1,000 or more	671,195	125,810	797,004	782,411	101.9	4,132	918	5,050	5,256	96.1

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public Teacher and Private Teacher Data Files,” 2003–04, and Teacher Follow-up Survey (TFS), “Final TFS Documentation Data Files and TFS Sample File,” 2004–05.

Chapter 10. Information on Data Files and Merging Components

The 2004–05 Teacher Follow-up Survey (TFS) is composed of two survey questionnaires—the Questionnaire for Current Teachers and the Questionnaire for Former Teachers. The questionnaires were administered to a sample of teachers from public (including public charter) and private schools that responded to the 2003–04 Schools and Staffing Survey (SASS). These two questionnaires became two data files that followed the populations targeted by the questionnaires: the current teacher data file, which includes teachers who remained in the same school as during the SASS school year (stayers) and teachers who moved to a new school in the 2004–05 school year (movers), and the former teacher data file, which includes teachers who left the pre-K–12 teaching profession after the 2003–04 school year (leavers). Table 21 identifies each data file and the questionnaire data used to build the file.

Table 21. Names of data files and the questionnaires from which the data were drawn: 2004–05

Data file	Questionnaire source
Current teacher	Questionnaire for Current Teachers
Former teacher	Questionnaire for Former Teachers

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), 2004–05.

Availability of Data

The 2004–05 TFS raw data are available in a restricted-use form only. The restricted-use files include confidentiality edits, which add “noise” to the data in order to make the identification of respondents in published data less certain. (See the section below on “Confidentiality Edits to the Data.”) Access to restricted-use data files is limited to individuals associated with organizations that have received a license to use SASS and TFS data. How to receive a restricted-use license is discussed in the next section.

Restricted-use data are accessed through an ECB, which is a searchable codebook, or data dictionary, on a CD-ROM that produces data files as specified by the user. Data are restricted-use because they contain identifiable information, which is confidential and protected by law. While direct identifiers, such as the respondent’s name, are not included on the files, the restricted-use files do feature more variables that can indirectly identify a respondent or that can be used to link SASS and TFS with the Common Core of Data (CCD) or other data files, which could provide the name of the school and lead to the identification of individual respondents.

The 2004–05 TFS restricted-use data are released in accordance with the provisions of the Education Sciences Reform Act of 2002, Public Law 107-279 (20 U.S.C. 9873), the Privacy Act of 1974, the USA Patriot Act of 2001, and the E-Government Act of 2002. NCES is responsible for protecting the confidentiality of individual respondents and releases data (CD-ROMs) for statistical purposes only. Record matching or deductive disclosure by any user is prohibited by federal law.

How to Get Restricted-Use Data Files

Researchers who can demonstrate a need for more detailed information may request access to the restricted-use datasets for statistical research purposes, provided that they follow computer security requirements and fill out an Affidavit of Nondisclosure.

Researchers requesting access to the restricted-use datasets must obtain a license to use those data by providing the following information:

- the title of the survey(s) to which access is desired (e.g., 2004–05 Teacher Follow-up Survey to the 2003–04 Schools and Staffing Survey);
- a detailed discussion of the statistical research project that necessitates accessing the NCES survey;
- the name of the principal project officer at the institution who will be heading up the research effort and who will enforce the legal provisions of the license agreement;
- the number, name(s), and job title(s) of professional and technical staff, including graduate students, who will be accessing the survey dataset; and
- the estimated loan period necessary for accessing the NCES survey dataset.

Return all of the above information to

NCES Data Security Office
Department of Education/NCES/ODC/SSP
1990 K Street NW
Room 9061
Washington, DC 20006

All of these procedures are detailed in the *NCES Restricted-Use Data Procedures Manual*, available for download at <http://nces.ed.gov/statprog/confid6.asp>.

After the access request has been reviewed, the requestor will be informed whether a license to use the restricted data has been approved.

Requestors and/or institutions that violate the agreement are subject to a fine of not more than \$250,000 (under the provisions of 18 U.S.C. 3559 and 3571) or imprisonment for not more than 5 years, or both. The confidentiality provisions that NCES must follow by law can be found at <http://nces.ed.gov/statprog>.

Researchers requesting TFS data will also receive the SASS data files from the previous year.

Understanding the Data Files

Confidentiality Edits to the Data

The restricted-use data files have been altered according to NCES standards. Known as confidentiality edits, “noise” was added to the data in order to make the identification of respondents less certain. These edits directly alter some data for individual respondents, but preserve the overall distributions and level of detail in all variables included on the file. There are several ways in which data can be altered, including blanking and imputing for randomly selected records; blurring (e.g., combining multiple records through some averaging process into a single record); adding random noise; and data swapping or switching (e.g., switching the variable for age from a predetermined pair of individuals). Both restricted-use TFS data files (i.e., Current Teacher and Former Teacher) were altered through one or more of these methods.

Treatment of Public Charter Schools and Schools Funded by the Bureau of Indian Affairs

Teachers who taught in schools funded by the Bureau of Indian Affairs (BIA) and public charter schools in the 2003–04 school year were included in the SASS sample. While teachers from public charter schools were included in TFS, those from BIA-funded schools were excluded from the data collection. BIA-funded school teachers were not included because of insufficient sample sizes in TFS. In SASS, the

data from BIA-funded schools, principals, teachers, and school library media centers were placed on separate data files that only include BIA-funded school-related components.

Public charter schools were first included in the 1999–2000 administration of SASS. At that time, the number of public charter schools was small enough that all known to be operational in 1998–99 and still operating in 1999–2000 were surveyed. The number of public charter schools has continued to grow, making it more feasible to sample public charter schools. A sample of 303 public charter schools was selected for the 2003–04 SASS. (See chapter 4 in the *Documentation for the 2003–04 Schools and Staffing Survey* [Tourkin et al. 2007] for details.) Data from these respondents were included in the public sector SASS and TFS data files. The variable CHARFLAG, which identifies whether the public school is a traditional public school or a public charter school, can be used for separately analyzing public charter data.

There were instances when schools did not fit exclusively into a single category of traditional public, public charter, or BIA-funded schools. In these instances, the following criterion for determining school type was applied:

- Schools included on the BIA Directory of schools were categorized as BIA-funded schools and included on the BIA SASS files.
- Schools that were on the BIA Directory of schools but also indicated that they were public charter schools were categorized as BIA-funded schools and included on the BIA SASS files.

In addition, how a school was classified on CCD (as public, public charter, or BIA) may not match how the school classified itself on the questionnaire. The following decisions were made to assign the school's type in SASS:

- Schools that were classified as public charter schools on CCD but did not claim charter school status on the questionnaire were categorized as traditional public schools.
- Schools that were classified as public schools on CCD but claimed to be charter schools on the questionnaire were categorized as public charter schools.
- Schools were not asked on the questionnaire whether they were funded by BIA; there were no inconsistencies with the school's type as it was assigned on the SASS sampling frame or on the SASS data files.

Categories of Variables

Variables on TFS data files were organized into the following five categories on each record layout: frame, survey, created, weighting, and imputation flag variables. Each of these categories was further separated into subcategories that provide more detail on each variable's source. The purpose of these categories is to help the user better understand what types of variables are included on the files and what the sources were for the variables.

Variables were classified as frame variables if they were drawn from or based on the TFS sampling frame, the SASS sampling frame, the CCD, or the Private School Universe Survey (PSS). There are four types of frame variables, or subcategories, identifying the source of each frame variable: TFS frame, 2003–04 SASS frame, 2001–02 CCD or PSS, or 2003–04 CCD or PSS. Frame variables used in the SASS or TFS sampling operations are explained in greater detail in chapter 3. Variables that were not used for sampling purposes but were classified as frame variables and placed on the files were selected because they provided potentially valuable information to the user that was not available from the survey itself. Examples of frame variables include the respondent's control, or identification, number (i.e.,

CNTLNUMS for schools and CNTLNUMT for teachers) and locale codes (i.e., SLOCP_03 and URBANS03). The frame variables are listed in “Appendix J. Frame and Created Variables.”

Survey variables are the actual variables drawn from the questionnaire responses. Each item on a questionnaire has a small number printed to the left. This series of numbers is the source code. A single letter was added to the beginning of the series to signify which type of respondent (i.e., teacher, school) is associated with a source code. All source codes for TFS begin with the letter “F.” For example, on the Questionnaire for Current Teachers, item 1a has the source code 0050 printed to the left. On the data file, the source code for this item is F0050. In SASS, the letter “D” was added for district, “S” for school, “A” for principal or administrator, “T” for teacher, and “M” for school library media center.

Created variables are based on survey variables, frame variables, other created variables, or a combination of these. These variables are frequently used in NCES publications and have been added to the files to facilitate data analysis. The code used to create these variables can be found in the description of each variable in the Codebook Window of the restricted-use Electronic Codebook. There are two subcategories for created variables based on whether the data used to create the variable were from “within” the teacher’s record (either from SASS or TFS data files) or from “other” data files in SASS. For example, the variable TOTEXPER on the current and former teacher data files is categorized as a “within” created variable, because it identifies the teacher’s total years of teaching experience as reported on the SASS teacher questionnaire. Likewise, STTUS_TF is included on the current and former teacher data files and is considered a “within” created variable, because it identifies whether the respondent has continued to teach at the same school as the previous year (stayer), has moved to a new school for the 2004–05 school year (mover), or has stopped teaching in grades pre-K–12 (leaver), as reported on the TFS surveys. A created variable labeled as being “other” is based on data from a file other than the teacher files. “Other” created variables were typically based on the SASS school or district data files and then placed on the TFS data files as a convenience to the user. For example, ENRK12UG is found on both the current and former teacher data files and is classified as an “other” created variable, because it provides the total student enrollment of the SASS school, as reported on the SASS school survey. The created variables are listed in “Appendix J. Frame and Created Variables.”

There are two types of weighting variables on each file. (For more information on weighting and standard errors, see chapter 8.) The first is the sampling weight, or final weight for the respondent, and the second includes the 88 replicate weights. The final weight adjusts for nonresponse and oversampling and is used so that estimates represent the population rather than simply the sample. The replicate weights are used as a set to generate standard errors for estimates. On the TFS files, the final weight is called TFSFINWT and the replicate weights are TFRPWT1 through TFRPWT88.

The imputation flags identify whether a survey item was imputed for missing data (described in detail in chapter 7) or whether a created variable was imputed because of a nonresponding school or district. All survey variables have a corresponding imputation flag that indicates whether a value was imputed and, if so, what method was used. All survey imputation flags begin with “F_” and are followed by the name of the variable. For example, the imputation flag for F0601 from the teacher files is F_F0601. In addition, there are three frame variables (SLOCP_03, STATE, and SC_ZIP) that have a corresponding imputation flag (FL_SLC03, FL_STAT, and FL_ZIP). The variable SLOCP_03 only applies to TFS respondents who taught in a public sector school in the 2003–04 school year. This variable and its flag were pulled directly from the 2003–04 CCD. The imputation flags for STATE and SC_ZIP identify the source of the data when they were imputed, so that the user is aware of whether the school’s or the respondent’s address was used to identify the respondent’s current state and ZIP code.

Certain created variables on TFS were also given imputation flags. The imputation flag for these created variables indicates whether the school or district failed to respond to SASS and, if so, then what type of

imputation was used as the source for the data. If the school or district did not respond to SASS, data are still present for these variables on the TFS files. All created variable imputation flags begin with “FL_” and are followed by at least the beginning of the name of the created variable. For example, the variable ENRK12UG comes from the SASS school file and provides the total K–12 and ungraded enrollment in the base-year school. It is placed on both the current and former teacher data files. The variable’s imputation flag is called FL_ENRK. These created variables were built with data from either the SASS district or school data files and placed on the TFS current and former teacher data files. However, if the district or school failed to respond to SASS, data would not be available to place on other files. These data were imputed using data from the sampling frame, if available, or imputed by hand.

Nonresponding Units

As described in chapter 3 on sample selection, the school was the primary sampling unit for SASS. For each sampled school, the principal, selected teachers, and the library media center and district, if applicable, were included in SASS. Not all of these types of respondents chose to participate in SASS. Consequently, it is possible to have several teacher records but no corresponding school record, because the school did not complete the SASS school questionnaire. Similarly, the district could have agreed to allow its schools to participate in SASS but failed to complete its questionnaire, resulting in having completed questionnaires for schools and principals but no corresponding district data. Table 22 below identifies the number of cases that have a corresponding unit that did not respond to the 2003–04 SASS. This information is particularly useful when match merging data files to identify how many cases are missing.

Table 22. Number of missing cases in combined SASS datasets, by nonresponding component and dataset providing unit of analysis: 2003–04

Unit of analysis	Observations	Nonresponding public component			
		Public school districts	Principals	Schools	School library media centers
Public school principal	8,143	1,288	†	407	1,249
Public school	7,991	1,221	255	†	1,213
Public school teacher	43,244	6,637	2,166	2,965	5,607
Public school library media center	7,229	1,126	335	451	†
Unit of analysis	Observations	Nonresponding private component			
		† ¹	Principals	Schools	† ¹
Private school principal	2,376	†	†	88	†
Private school	2,456	†	168	†	†
Private school teacher	7,979	†	509	475	†
Unit of analysis	Observations	Nonresponding BIA-funded component ²			
		† ³	Principals	Schools	School library media centers
BIA-funded school principal	146	†	†	5	24
BIA-funded school	145	†	4	†	23
BIA-funded school teacher	624	†	21	30	81
BIA-funded school library media center	124	†	2	2	†

† Not applicable.

¹ Private sector components did not include the School District Questionnaire and private schools did not receive the School Library Media Center Questionnaire.

² BIA refers to the Bureau of Indian Affairs.

³ BIA-funded sector components did not include the School District Questionnaire.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2003–04.

Table 23 provides similar information for TFS. The TFS data files are divided by sector (i.e., current public school teacher, current private school teacher, former public school teacher, and former private school teacher data files) and match merged with each SASS data file to identify which TFS cases do not have a matching component for analysis. Districts, principals, schools, and library media centers that did not have a teacher who was sampled for and responded to TFS are excluded from this table.

Table 23. Number of missing cases in combined datasets, by merged SASS data file and TFS data file by sector providing unit of analysis: 2003–04 and 2004–05

Unit of analysis	Observations	Nonresponding SASS public component			
		Public school districts	Principals	Schools	School library media centers
Public school current teacher	3,497	283	143	187	396
Public school former teacher	1,826	181	94	115	243
Unit of analysis	Observations	Nonresponding SASS private component			
		† ¹	Principals	Schools	† ¹
Private school current teacher	1,279	†	54	53	†
Private school former teacher	827	†	59	50	†

† Not applicable.

¹ Private schools did not receive the School District Questionnaire or the School Library Media Center Questionnaire.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2003–04; Teacher Follow-up Survey (TFS), 2004–05.

Linking Files Within and Across TFS and SASS

In SASS, when each school was selected for the school sample, its principal or school head was selected for the principal sample, along with a sample of teachers at that school. For public schools, the school district having jurisdiction over the sampled school was selected for the district sample. For public and BIA-funded schools, a staff member who was responsible for the school library media center, if any, was also included in the school library media center sample. The School Library Media Center Questionnaire was not given to private schools. In the following school year, a sample of teachers from those who responded to the teacher questionnaire in SASS were contacted to complete TFS.

On restricted-use TFS and SASS data files, any combination of the school, principal, teacher, and library media center (if applicable) datasets within each school sector can be merged using the school's control number (CNTLNUMS). Consequently, all of the SASS files can be merged with the TFS data files. The one exception is that no teachers who taught in a BIA-funded school during the SASS school year were included in the 2004–05 TFS. The school control number is present on all TFS and SASS files, except for the district data file,²⁵ and will link them together. The SASS and TFS teacher data files can be linked to provide data on two school years using the teacher's control number (CNTLNUMT).

The public teacher, school, principal, and library media center datasets may be merged with the district dataset. School and district datasets can be merged using the district's control number (CNTLNUMD) or by parsing out the first five digits of the school's control number and the district's control number.

There are two ways in which files can be merged. The first involves match merging files. An example of this is when the user would like to merge a school's record with the records of its teachers. The school

²⁵ The school control number is not included on the district data file because usually there is more than one school associated with a district. Consequently, the school's control number cannot be used to merge the district and school data files.


```

if a=1;                               /* keep all dataset1 records and only matching dataset2
                                         records */
run;

```

Merging the Restricted-use Public School District Data File with Other Public Sector Data Files

There are two ways to merge the public school district data file with other public sector data files. The first is with the district's control number (CNTLNUMD). This variable is included on the public school district data file as well as the public school data file. The sample syntax provided above is correct, except that the merging variable will be CNTLNUMD.

The second method is by parsing out the first five digits of the district's and the school's control number. Users will need to use this method if the school did not respond to SASS. The first five digits of CNTLNUMS and CNTLNUMD are identical, so users can create a new variable using a substring of these control numbers and merge the data files by the new variable name. The SAS syntax provided below illustrates how to merge the public school district data file with other data files using a substring. Please note that the data files being merged must be sorted by the variable listed in the "by" statement prior to performing the merge. Comments to explain lines of syntax are contained within "/* */"; words in italics are meant to be replaced by meaningful file or variable names.

```

data workfilename1;
set school_or_principal_or_teacher_pr school library media centerdatafile;
newvariablename = substr (CNTLNUMS,1,5);
run;
proc sort;
by newvariablename;
run;
data workfilename2;
set districtdatafile;
newvariablename = substr (CNTLNUMD,1,5);
run;
proc sort;
by newvariablename;
run;
data mergedfilename;
merge workfilename1 workfilename2; /* No unit of analysis file is identified, so all records
                                         from both files will remain */
by newvariablename;
run;

```

Attaching Value Labels to Variables Extracted from the Electronic Codebook (ECB)

While the formatting syntax is provided, it is up to the user to call up the labels. There are three primary ways to accomplish this. First, value labels for each variable can be reviewed within the ECB. When variables are extracted from the ECB there is a box on the right-hand side of the pop-up window that requests the creation of a codebook. Check this box in order to have the ECB create a text file with the codebook information for all extracted variables. Then within this text file use the find function to locate the variable and determine the value labels.

Second, labels may be manually attached using the PROC step in SAS. To do this, review the syntax created from the extraction process to determine the value label name associated with each variable. In

general, the Format name drops the last digit or letter in the variable name and adds the letter “F” at the end. There are exceptions to this rule.

As an example, the appropriate SAS syntax for a PROC FREQ is given below. Words in italics are meant to be replaced by meaningful file or variable names.

```
proc freq;
format varname valuename.;
tables varname;
run;
```

A third method is to create a permanent value label library in SAS. This requires users to manipulate the SAS syntax generated from the extraction. To begin, users need to create a permanent library for the value formats that includes all of the value formats they would like to keep. In the SAS syntax that follows, please note that comments to explain lines of syntax are contained within “/* */” and words in italics are meant to be replaced by meaningful file or variable names.

```
libname library 'C:\librarypath';          /*assigns format library, libname must be “library”*/

proc format library=library;              /*creates permanent formats in the directory specified
                                           in library libname statement*/

[List all of the value formats here]
VALUE      URBANIF
1 = “Large or mid-size central city”
2 = “Urban fringe of large or mid-size city”
3 = “Small town/Rural”
;
VALUE      VIOLPRF
0 = “School does not have a violence prevention program”
1 = “School has a violence prevention program but no formal procedure for assessing its
    effectiveness”
2 = “School has a violence prevention program and a formal procedure for assessing its
    effectiveness”;
```

The above syntax is written before the user’s first data step and set statements. Within the data step programming that follows, the following format commands must be included:

```
FORMAT varname valuename.;
```

Sample SPSS Syntax for Merging Data Files

NOTE: Both data files being merged must be sorted by the variable listed in the “by” statement prior to performing the merge. In SPSS, value labels are attached automatically during the extraction process.

Merging Restricted-use Data Files Using the Teacher Control Number (CNTLNUMT)

When merging records for teachers from the TFS data files to their records in the SASS data files, the teacher’s control number, CNTLNUMT, is used to match files. The SPSS syntax is provided below. Words in italics are meant to be replaced by meaningful file or variable names.

```

get file = 'dataset1.sav';
sort cases by CNTLNUMT(A);
save outfile = 'dataset1.sav';
get file = 'dataset2.sav';
sort cases by CNTLNUMT(A);
save outfile = 'dataset2.sav';
match files file = 'dataset1.sav';
    /table 'dataset2'
    /by CNTLNUMT.
save outfile = 'mergeddatafile.sav';

```

Merging Restricted-use Data Files Using the School Control Number (CNTLNUMS)

When merging any of the school, principal, teacher, or library media center files together for a given school, the school's control number, CNTLNUMS, is used to match files. The SPSS syntax is provided below. Words in italics are meant to be replaced by meaningful file or variable names.

```

get file = 'dataset1'.
sort cases by CNTLNUMS(A).
save outfile = 'dataset1'.
get file = 'dataset2'.
sort cases by CNTLNUMS(A).
save outfile = 'dataset2'.
match files file = 'dataset1'
    /table 'dataset2'
    /by CNTLNUMS.
save outfile = 'mergeddatafilelocation'.

```

Merging Restricted-use Public School District File with Other Public Sector Files

There are two ways to merge the district file with other public sector files. The first is with the district's control number (CNTLNUMD). This variable is included on the district file as well as the public school file. The sample code provided above is correct, except that the merging variable will be CNTLNUMD.

The second method is by parsing out the first five digits of the district's and the school's control number. Users will need to use this method if the school did not respond to SASS. The first five digits of CNTLNUMS and CNTLNUMD are identical, so users can create a new variable using a substring of these control numbers and merge the files by the new variable name. The SPSS syntax provided below illustrates how to merge the public school district file with other data files using a substring. Please note that the data files being merged must be sorted by the variable listed in the "by" statement prior to performing the merge. In addition, including "(a5)" for the substring specifies the new variable as a five-character alphanumeric variable. Words in italics are meant to be replaced by meaningful file or variable names.

```

get file = 'school_or_principal_or_teacher_or_librarydatafile.sav';
string newvariablename (a5);
compute newvariablename = substr(CNTLNUMS,1,5);
sort cases by newvariablename;
save outfile = 'temporarydatafile.sav';
get file = 'districtdatafile.sav';
string newvariablename (a5);

```

```

compute newvariablename = substr(CNTLNUMD,1,5);
sort cases by newvariablename;
save outfile = 'temporarydistrictdatafile.sav';
match files file = 'temporarydatafile.sav'
    /table 'temporarydistrictdatafile'
    /by newvariablename;
save outfile = 'mergeddatafile.sav';

```

Sample Stata Syntax for Merging Data Files

Merging Restricted-use Data Files Using the School Control Number (CNTLNUMS)

When merging any of the school, principal, teacher, or school library media center data files together for a given school, the school's control number, CNTLNUMS, is used to merge data files. The Stata syntax is provided below. Notice that both data files being merged must be sorted by the school control number prior to performing the merge. Words in italics are meant to be replaced by meaningful file or variable names.

```

use dataset1
sort CNTLNUMS
save dataset1, replace
use dataset2
sort CNTLNUMS
save dataset2, replace
merge CNTLNUMS using dataset1

```

Merging the Restricted-use Public School District Data File with Other Public Sector Data Files

There are two ways to merge the public school district data file with other public sector data files. The first is with the district's control number (CNTLNUMD). This variable is included on the public school district data file as well as the public school data file. The sample syntax provided above is correct, except that the merging variable will be CNTLNUMD. However, since CNTLNUMD is not included on the principal, teacher, or school library media center data file, merging the public school district data file with these data files requires a different approach. Users will also need to use this method if the school did not respond to SASS.

The second method parses out the first five digits of the district's and the school's control number. The first five digits of CNTLNUMS and CNTLNUMD are identical, so users can create a new variable using a substring of these control numbers and merge the data files by the new variable name. The Stata syntax provided below illustrates how to merge the public school district data file with other data files using a substring. Please note that the data files being merged must be sorted by the variable listed in the "sort" statement prior to performing the merge. Users may need to increase memory before beginning the merge.

```

use districtfile
generate newvariablename = substr(CNTLNUMD,1,5)
sort newvariablename
save tempdistrictfile, replace
use school_or_principal_or_teacher_or_libraryfile
generate newvariablename = substr(CNTLNUMS,1,5)
sort newvariablename

```

```
save tempschool_or_principal_or_teacher_or_libraryfile, replace  
merge newvariablename using tempdistrictfile  
drop if _merge==2  
save mergedfile, replace
```

Unless specified, the default name of the merge variable created during the merging of files is `_merge`. The variable `_merge` identifies the various categories of data in a one-to-one merge. For example, if users merge the public school district (“using” data file) file onto the principal file (“master” data file):

<code>_merge=1</code>	observations from principal data file, no public school district data added (occurs with district nonresponse)
<code>_merge=2</code>	observations from only public school district data file (e.g., district responded, but there is no principal from that district)
<code>_merge=3</code>	observations from public school district and principal data files

By dropping the `_merge=2` observations, the merged data file will contain only principals, regardless of whether their district responded. No observations will remain when a district responded without a principal.

Chapter 11. User Notes and Cautions

The following notes cover cautions concerning change estimates with particular emphasis on the locale codes, population estimates for teachers that were produced by the 2004–05 Teacher Follow-up Survey (TFS) and the 2003–04 Schools and Staffing Survey (SASS), imputation of missing data for the created variable for percent minority enrollment (MINENR), and user notes and cautions for the 2003–04 SASS.

Users may also be interested in examining the crosswalk of variables contained in “Appendix K. Crosswalk of Items in 2004–05 TFS with 2000–01 TFS and 2003–04 SASS Teacher Questionnaire.” This appendix has crosswalks for both TFS questionnaires.

Cautions Concerning Change Estimates

Care must be taken in estimating change over time in a TFS data element, because some of the measured change may not be attributable to a change in the educational system, but due to changes in the sampling frame, questionnaire item wording, or other changes. For example, the definitions of the locale codes based on the U.S. Census were revised in 2000 and again in 2003. Changes in how schools’ locales are categorized over time may account for at least some changes that are noted from previous administrations. This impacts the urbanicity variables included in the data files, which are based on the 2000 Census definitions for locale codes.

The definition of locale codes changed between the 1999–2000 and 2003–04 administrations of SASS. To facilitate the transition, locale codes based on geographic concepts from both the 1990 and 2000 Decennial Census are included on the 2003–04 SASS data files. (SLOCP_99 uses the 1990 Census metropolitan areas, and SLOCP_03 and URBANS03 use the 2000 Census metropolitan areas.) The specific categories reported in the locale codes are based, respectively, upon the 1990 or 2000 definitions for central city, urban fringe of large or medium-sized central city, large or small town, and rural areas either inside a metropolitan area or outside a metropolitan area. The 1990 Decennial Census geographic areas were based upon countywide definitions of metropolitan or nonmetropolitan areas. By the 2000 Census, urban and rural classifications were based on a subcounty level.

In 2003, the Office of Management and Budget changed the geographic classifications, replacing “central city” with “principal city” and “Standardized Metropolitan Statistical Area” (SMSA) with “Core-based Statistical Area” (CBSA). However, these newer terms and locale codes could not be used in the 2003–04 SASS because the 2003 geographic classification of schools or school districts had not been completely implemented into the Common Core of Data (CCD) or the Private School Universe Survey (PSS), which serve as the sampling frames for SASS, by the time the 2003–04 SASS data were collected. Since then, the 2003–04 CCD and 2003–04 PSS have incorporated a new set of 12-level locale codes.

Only the urbanicity variables that utilize the 2000 definitions (SLOCP_03 and URBANS03) are included on the 2004–05 TFS data files. Therefore, caution should be taken when comparing urbanicity estimates from the 2004–05 TFS of the respondent’s base-year school with previous administrations, because the locale codes are not based on the same definitions.

Estimates for Total Teachers

The total population estimate of teachers produced in TFS is slightly lower than that produced in SASS. The discrepancy is due to the fact that there were 99 respondents in SASS who were out of scope for TFS, because they had died or moved out of the country. These teachers were removed from the TFS sampling

frame. (See chapter 3 for more details on the sampling frame and chapter 8 for more details on weighting.)

Minority Enrollment

The variable measuring the number of minority students as reported by the SASS school (NMINST_S) is copied from data on the SASS school data files and placed on the TFS data files. The variable was imputed for 486 teachers on TFS whose schools did not respond to SASS.

There are three respondents in the TFS data files who have a value for the variable measuring the percentage of minority students in the SASS school (MINENR) in TFS but have missing data (-9) in the SASS data files. The values for MINENR were clerically imputed for the TFS data files. The missing data were imputed on TFS in order to produce the variable NMINST_S (number of minority students as reported by the SASS school) for TFS teachers whose corresponding base-year school did not respond to SASS.

User Notes and Cautions for SASS

Please see chapter 12 in *Documentation for the 2003–04 Schools and Staffing Survey* (Tourkin et al. 2007) for more details on user notes and cautions for data collected in the 2003–04 Schools and Staffing Survey (SASS). Notes and cautions were provided on the following:

- editing of the created variable for percent minority enrollment (MINENR);
- deletion of Title I data in Bureau of Indian Affairs (BIA) funded schools;
- data anomalies in created variables;
- the effect of missing data across files;
- locale codes used on the 2003–04 SASS;
- departmentalized and elementary enrichment teachers with no reported classes; and
- the existence of leading spaces on certain character variables in extracted SPSS files.

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Appendix A. Key Terms for TFS

The following terms are defined as they apply to the 2004–05 Teacher Follow-up Survey (TFS) and, if applicable, to the 2003–04 Schools and Staffing Survey (SASS).

Affiliation stratum. SASS uses 17 mutually exclusive categories into which all private schools are hierarchically divided based on religious or nonreligious orientation/affiliation. These categories are Catholic—Parochial, Catholic—Diocesan, Catholic—Private, Amish, Assembly of God, Baptist, Episcopal, Jewish, Lutheran Church—Missouri Synod, Wisconsin Evangelical Lutheran Synod, Mennonite, Pentecostal, Seventh-Day Adventist, Other Religious, Nonsectarian—Regular, Nonsectarian—Special Emphasis, and Nonsectarian—Special Education.

Age. As reported in the *Teacher Attrition and Mobility* report (NCES 2007-307), the age of the respondent during the 2003–04 SASS data collection is based on the reported year of birth.

Assessment, state or district. State or district tests that assess student performance in various subject areas.

Base weight. This is the inverse of the probability of selecting a teacher for TFS. This weight is the product of the SASS teacher base weight and the TFS subsampling adjustment factor. The TFS subsampling adjustment factor is an adjustment that accounts for the subsampling of teachers from SASS sampled teachers. Thus, this base weight reflects the TFS probability of selection from all three stages of selection (i.e., SASS school sampling, SASS teacher sampling within school, and TFS sampling from SASS teachers). See also definitions for “final weight” and “weighting adjustment factor.”

Certification. A license or certificate awarded to teachers by the state to teach in a public school. The SASS and TFS surveys include five types of certification: regular or standard state certification or advanced professional certificate; probationary certificate—issued after satisfying all requirements except the completion of a probationary period; provisional or other type of certificate—given to persons who are still participating in what the state calls an “alternative certification program”; temporary certification—requires some additional college coursework, student teaching, and/or passage of a test before regular certification can be obtained; and waiver or emergency certificate—issued to persons with insufficient teacher preparation who must complete a regular certification program in order to continue teaching.

Charter school. See “public charter school.”

Combined school. See “school with combined grades.”

Common Core of Data (CCD). The Common Core of Data is a group of surveys that acquire and maintain public elementary and secondary education data from the 50 states, the District of Columbia, Department of Defense schools, and the outlying areas through the state-level (or equivalent) education agencies. Information about staff and students in public schools is collected annually at the school, LEA (Local Education Agency or School District), and state levels. Information about revenues and expenditures is also collected at the state level. CCD is the basis for the SASS sampling frame for traditional public, public charter, and BIA-funded schools.

Community type. A three-level categorization based on the eight-level U.S. Census Bureau definition of locale. A central city school is a school located in a large or midsize central city. An urban fringe/large town school is a school located in the urban fringe of a large or midsize city, in a large town, or in a rural

area within an urbanized metropolitan area. A rural/small town school is a school located in a small town or rural setting, and located outside an urbanized metropolitan area.

Current teachers. Teachers who continued to teach any of grades pre-K–12 in the 2004–05 school year. Current teachers include those who remained at the same school as in 2003–04 or moved to a different school. See also the definitions for “movers” and “stayers.”

District. A Local Education Agency (LEA), or public school district, is defined as a government agency that employs elementary- or secondary-level teachers and is administratively responsible for providing public elementary and/or secondary instruction and educational support services.

Elementary school. See “school, elementary.”

Final weight. This is the product of the TFS base weight (described under “base weight”), the TFS-to-SASS weighting adjustment factor (described under “weighting adjustment factor”), the TFS noninterview adjustment factor, and the TFS ratio adjustment. The final weight is used to produce weighted estimates from the survey data. See chapter 8 for details of the weighting procedure. See also the definitions for “base weight” and “weighting adjustment factor.”

Former teachers. See “leavers.”

Full standard state administrative certification. See “certification.”

Itinerant teacher. See “teacher.”

Leavers. Teachers who left the teaching profession or teachers who were no longer teaching in any of grades pre-K–12 after the 2003–04 school year (includes teachers whose status changed to short-term substitute, student teacher, or teacher aide).

Main assignment field. As reported in the *Teacher Attrition and Mobility* report (NCES 2007-307), the field in which the respondent taught the most classes during the 2003–04 school year. Among the 73 possible choices for assignment fields, eight general subject matter areas are presented in the report: early childhood/general elementary, special education, arts/music, English/language arts, mathematics, natural sciences, social sciences, and other.

Minority. Minority includes Black, non-Hispanic; American Indian/Alaska Native, non-Hispanic; Asian, non-Hispanic; Native Hawaiian or other Pacific Islander, non-Hispanic; Hispanic, single or multiple races; and multiple races, non-Hispanic.

Missing data. TFS is a fully imputed dataset. Consequently, the only survey items that lack responses are either those that are part of a skip pattern and should not have been answered by a particular respondent or write-in responses, which include data too specific to reasonably impute from another respondent’s data. Data pulled from the frame (i.e., the Common Core of Data or the Private School Universe Survey) are not necessarily imputed for missing data. In these instances, a value of -9 (indicating missing data) is provided for that variable.

Movers. Teachers who were still teaching any of grades pre-K–12 in 2004–05, but had moved to a different school after the 2003–04 school year.

Multiple races, non-Hispanic. All non-Hispanic respondents who selected more than one race.

Private school. A private school is defined as a school not in the public system that provides instruction for any of grades 1–12 (or comparable ungraded levels). The instruction must be given in a building that is not used primarily as a private home.

Private School Universe Survey (PSS). The Private School Universe Survey is a biennial survey designed to collect data from all K–12 private schools in the 50 states and the District of Columbia. It is the universe from which the sample for the private school component of SASS is selected.

Public charter school. A public charter school is a public school that, in accordance with an enabling state statute, has been granted a charter exempting it from selected state or local rules and regulations. A public charter school may be a newly created school or it may previously have been a public or private school.

Public school. A public school is an institution or part of an institution that provides classroom instruction to students, has one or more teachers to provide instruction, serves students in one or more grades of 1–12 or the ungraded equivalent, and is located in one or more buildings. It is possible for two or more schools to share the same building; in this case they were treated as different schools if they had different administrations (i.e., principals). Public schools include regular, special education, vocational/technical, alternative, and public charter schools. Schools in juvenile detention centers and schools located on domestic military bases and operated by the Department of Defense are included. See also the definitions for “public charter school” and “traditional public school.”

Race/ethnicity. As reported in the *Teacher Attrition and Mobility* report (NCES 2007-307), the race/ethnicity category of the respondent. In the 2003–04 SASS, respondents identified whether or not they were of Hispanic or Latino ethnic origin as well as which race(s). Respondents could choose more than one race. Among the 62 possible racial and ethnic combinations, six are presented in the report: non-Hispanic White; non-Hispanic Black; Hispanic (single or multiple race); non-Hispanic Asian, Native Hawaiian, or other Pacific Islander; non-Hispanic American Indian or Alaska Native; and more than one race, non-Hispanic.

Regular full-time teacher. See “teacher.”

Salary, base. As reported in the *Teacher Attrition and Mobility* report (NCES 2007-307), the respondent’s 2003–04 academic year base teaching salary.

School, elementary. A school is classified as elementary if it has one or more of grades K–6 and none of grades 9–12; for example, schools with grades K–6, 1–3, or 6–8 are classified as elementary. Schools with only kindergarten or prekindergarten were not included in the survey.

School, secondary. A school is classified as secondary if it has any of grades 7–12 and none of K–6; for example, schools with grades 9–12, 7–9, 10–12, or 7–8 are classified as secondary.

School with combined grades. A combined school or combined grade school has one or more of grades K–6 and one or more of grades 9–12; for example, schools with grades K–12, 6–12, 6–9, or 1–12 were classified as having combined grades. Schools in which all students are ungraded (i.e., not classified by standard grade levels) are also classified as combined.

Secondary school. See “school, secondary.”

Stayers. Teachers who were still teaching any of grades pre-K–12 and in the same school in 2004–05 as in 2003–04.

Teacher. A teacher is defined as a full-time or part-time teacher who teaches any regularly scheduled classes in any of grades pre-K–12. This includes administrators, librarians, and other professional or support staff who teach regularly scheduled classes on a part-time basis. Itinerant teachers are included, as well as long-term substitutes who are filling the role of regular teacher on a long-term basis. An itinerant teacher is defined as a teacher whose assignment requires teaching at more than one school (e.g., a music teacher who teaches 3 days per week at one school and 2 days per week at another). Itinerant teachers, who teach full-time in any district, but teach part time in a particular school are considered part-time teachers at that particular school. A regular full-time teacher is any teacher whose primary position in a school is not an itinerant teacher, a long-term substitute, a short-term substitute, a student teacher, a teacher aide, an administrator, a library media specialist or librarian, another type of professional staff (e.g., counselor, curriculum coordinator, social worker) or support staff (e.g., secretary), or a part-time teacher. Short-term substitute teachers, student teachers, and teacher aides are not included.

Teacher status. Respondents' status as a stayer, mover, or leaver in the 2004–05 school year. See also the definitions for “stayer,” “mover,” and “leaver.”

Teaching experience, full-time. As reported in the *Teacher Attrition and Mobility* report (NCES 2007-307), the number of years worked as a full-time elementary or secondary teacher in a traditional public, public charter, private, or Bureau of Indian Affairs-funded school up to and including the 2003–04 school year.

Teaching status. As reported in the *Teacher Attrition and Mobility* report (NCES 2007-307), teachers who worked full- or part-time during the 2003–04 school year.

Traditional public school. Traditional public schools are the subset of all public schools that are not public charter schools. They include regular, special education, vocational/technical, and alternative schools. They also include schools in juvenile detention centers, and schools located on domestic military bases and operated by the Department of Defense. See also the definitions for “public school” and “public charter school.”

Valid skip. An item that was not applicable due to a response to a previous item on the same questionnaire and was provided with a value of -8, indicating a valid skip. Certain survey items direct respondents to skip subsequent items based on their answers to the original item, or stem. For instance, if a respondent answered “Yes” to item 19a on the Questionnaire for Current Teachers (“Are you currently teaching in the same school as you were last year?”), he or she was directed to skip items 19b through 25 (these items collect data about the new school) and to “GO TO item 26 on page 16.” Because the respondent answered that he or she is teaching at the same school as in the previous year, subsequent questions about the school and reasons for moving to a different school were not applicable. In instances when an item should not have been answered by the respondent, a value of -8, which designates a valid skip, is applied to that variable(s).

Weighting adjustment factor. The TFS-to-SASS weighting adjustment factor adjusts for all stages of weighting that occurred between the base and final weighting calculations for SASS teachers. It adjusts for the fact that SASS teacher base weights were used to select the TFS sample, but the SASS final teacher weights are more reflective of the teacher population.¹

¹ SASS teacher weighting was not completed in time to use final teacher weights in the TFS sample selection, necessitating the use of the SASS teacher base weights in the TFS sampling.

Appendix B. TFS Questionnaire Availability

Online, Downloadable PDF Files

Questionnaires for every data collection component in every survey cycle since the first 1988–89 Teacher Follow-up Survey (TFS) and the first 1987–88 Schools and Staffing Survey (SASS) are available online as downloadable portable document format (PDF) files at

<http://nces.ed.gov/surveys/sass/questionnaire.asp>

Select the survey year of interest and then proceed to select the specific questionnaire to browse or download. Within the listing of SASS questionnaires, the Teacher Listing Form is the form that gathers the data used to select the SASS teacher sample. While no data for this form are reported publicly, the questionnaire form is available on the SASS website only for those interested in survey methodology.

In general, as the 4-year SASS survey cycle advances toward the next data collection, the questionnaires will be posted online as they are finalized and sent to the printer. The TFS survey cycle is administered 1 year post-SASS. The surveys will be posted approximately 2 months prior to the data collection phase of each of the survey cycles. The next TFS survey cycle is planned for the 2008–09 school year.

PDF files of the questionnaires are also available on the *2003–04 Schools and Staffing Survey (SASS) and 2004–05 Teacher Follow-up Survey (TFS) CD-ROM* with Electronic Codebook (ECB). All of the 2003–04 SASS questionnaires and the 2004–05 TFS questionnaires are available on the restricted-use version (forthcoming). No public-use version of the ECB will be produced.

All of the SASS and TFS questionnaires are in the public domain. All survey items may be copied by anyone who wishes to use them in another survey, without any restrictions.

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Appendix C. Summary of TFS Interview Findings and Recommendations

This appendix contains an April 9, 2004, report by Michael Long of ORC Macro. The material is organized as follows:

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Items 15 and 16 (Former Teacher): Decision to Leave Teaching.....	C-7
Item 17 (Former Teacher)/Item 27 (Current Teacher): Last Year’s Teaching Position and Item 9 (Current Teacher): Current Teaching Position	C-9
Item 18 (Former Teacher)/Item 28 (Current Teacher): Last Year’s School and Item 10 (Current Teacher): Current School	C-10
Item 20 (Former Teacher)/Item 30 (Current Teacher): Last Year’s Instructional Leader and Item 12 (Current Teacher): Current Instructional Leader	C-11
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Items 36–37 (Former Teacher)/Items 52–53 (Current Teacher): Marital Status	C-20
Item 6 (Current Teacher): Teaching Certificate.....	C-21
Items 35–36 (Current Teacher): Decision to Leave Last Year’s School	C-22
Item 37 (Current Teacher): Comparing Current Teaching Position to Last Year’s Teaching Position	C-23
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Background

In March 2004, the U.S. Census Bureau contracted with ORC Macro, a research and evaluation company in Calverton, Maryland, to plan and carry out a series of cognitive interviews with current and former teachers. The purpose of these interviews was to gather feedback from teachers on a number of proposed questions for the Teacher Follow-up Survey (TFS), which is administered by the Census Bureau every 4 years.

This report is a summary of the methodology that ORC Macro used in these interviews, as well as the feedback received from interview participants. The report also provides Macro's recommendations for revisions to the proposed TFS questions.

Summary of Methodology

Recruitment

ORC Macro recruited teachers in the eight categories shown in table C-1, using a database of potential participants that the company has built up through its experience doing educational research in the area. The majority of these participants lived in Maryland, Virginia, and the District of Columbia. In order to recruit teachers from other states, staff contacted a number of state retired teacher associations; some of these associations sent out information about this study to their members. Each interview participant was provided with an honorarium of \$60.

Description of Participants

ORC Macro conducted interviews with 31 current and former teachers in the categories shown in table C-1 below. The total number of teachers in table C-1 is greater than 31, because some participants fell into more than one category.

Table C-1. Description of interview participants: 2004

Group	Number of participants who qualify for each category
A. Current teachers who have switched schools in the past year	6
B. Current teachers who are within 3 years of retirement age	4
C. Current teachers who retired and then returned to teaching	3
D. Current teachers who self-identify as gay or lesbian	2
E. Former teachers who left teaching before retirement age	4
F. Former teachers who retired in the last 2 years	3
G. Former teachers who received early retirement incentives from their state/district	4
H. Current teachers who do not fit the above categories	7

SOURCE: *Summary of TFS Interview Findings and Recommendations*, OCR Macro, 2004.

Interviews were conducted with participants in Alaska, Maine, Maryland, Massachusetts, New Hampshire, New York, Virginia, and the District of Columbia. Participants were recruited in multiple states for two reasons:

- It proved difficult to find Maryland teachers who had received early retirement incentives, since these incentives have not been given recently in this state.

- For questions about retirement plans and certification, staff felt it would be valuable to get feedback from teachers in a number of states.

Interview Protocol

ORC Macro conducted individual cognitive interviews with 19 participants. Eight participants were interviewed in pairs, and a group interview session was held with four participants. Six of the individual interviews were conducted by phone.

Each interview was approximately 90 minutes long. The methodology used in these cognitive interviews was a “think-aloud” protocol. Participants were asked to answer the proposed TFS items as they normally would. As they answered each item they were asked to describe aloud what they were thinking. At certain points in the interview, the interviewer would ask follow-up questions or probes, or ask other questions related to the topics being covered.

Although the protocol contained interview questions for all TFS items being studied, due to time constraints each interview participant was only given a selection of items to review. Slight modifications were made to the protocol on an ongoing basis, based on feedback coming out of the interviews.

Summary of Participant Feedback and Recommendations

The following pages contain the feedback received from interview participants for each of the proposed TFS items. This summary is limited to feedback received from at least two participants independently, or to comments made by a single participant that were felt to be particularly important to consider.

For each item, there is a section describing participant feedback, followed by a list of OCR recommendations for modifications that should be made to the questions. Particularly important feedback that directly led to the recommended changes is provided first and is shown in boldface.

Some questions appear on both the Questionnaire for Former Teachers (Form TFS-2) and the Questionnaire for Current Teachers (Form TFS-3). In the following sections, the item numbers are followed by either “(Former Teacher)” or “(Current Teacher)” to identify the questionnaire in which the item appeared.

Items 3, 6, 7 (Former Teacher): Employment Outside of Teaching

Feedback From Participants

- Two participants were unsure of whether to include their spouse’s income in item 7; both made the decision not to.
- All six participants who were former teachers and now have another job answered “No” to item 7. Based on their descriptions of what sources of income they had excluded from their answers, all participants followed the directions as written without any problem.
- Participants were given several hypothetical sources of income and asked if they would include them in their answers for item 7. Almost all followed the directions as written without any problem.
 - All said that they would not include proceeds from selling a house.
 - All but one said that they would not include a retirement pension that they received.
 - All said that they would include money from a part-time job.

Recommendations

- Reword directions for item 7 as follows: “Do not include income earned by a spouse, or dividends, interest, rent...”

Item 8 (Former Teachers): “How long do you plan to remain in this job?”

Feedback From Participants

- *Answer choice 1.* Most participants felt that this choice meant they would work until they were no longer physically healthy enough, or until “extenuating circumstances” forced them to switch jobs. One, who was self-employed, thought that this option meant that she would stay in her job as long as she could support herself.
- *Answer choice 5.* The phrase “something better” meant different things to different participants, from a full-time job to something “more challenging,” or something with better benefits or salary. Some participants felt that the implication was that people who chose option 5 were not actively looking for work.
- *Answer choice 6.* Participants interpreted this choice to mean that they hated their job and wanted to get out of it. Most felt that a person who selected this option would be actively looking for a job.

Recommendations

OCR recommends the following two changes in order to keep the answer choices in this item parallel to those in Questionnaire for Current Teachers item 39.

- o Change the wording of answer choice 5 to “Will continue unless a more desirable opportunity comes along.”
- o Add an additional option: “Until a specific life event occurs (e.g., parenthood, marriage, etc.).”

Items 9–14 (Former Teacher): Retirement

Feedback From Participants

NOTE: Staff discussed teacher retirement plans with public school teachers from Maryland, Alaska, Maine, New Hampshire, New York, North Carolina, Virginia, and the District of Columbia.

- Some teachers who answered these items felt that items 9 and 13 were redundant. However, all of these teachers taught in public schools and did not take into account private school teachers who may not receive a pension when they retire.
- Some participants who had left the field of teaching before retirement age had difficulty with item 13, “Do you consider yourself to be retired from teaching?” Three of four found it difficult to interpret what was meant by the word “retire,” since they had not officially “retired” but were not planning on returning to the field. Two of the three participants answered “No” to item 13, while the other answered “Yes.”
- Two teachers commented that the criteria for “early retirement incentive” given in item 10 would be met by a state or district policy that allowed teachers to retire early at a lower pension rate (as most states do). One also pointed out that early retirement incentives can be given to teachers who are already at retirement age, not just those that have not yet reached that age.
- All participants said that the retirement age in their state was based on a combination of years of service and age. Most said that an early retirement option was available for teachers, but that in order to do take it teachers had to give up a portion of their benefits.
- Younger teachers knew very little about their state’s retirement plans, so it was difficult to get information from them on this subject. Some states seem to be moving away from a traditional “pension plan” for teachers and replacing it with a 403(b). However, all the teachers that staff spoke to who were at or near retirement age receive (or were anticipating) a pension.
- Staff interviewed two teachers from private schools. One said that his school offers a 403(b), but does not offer a pension or any retirement benefits that begin at a particular age or length of service (e.g., lifelong health coverage). The other, who works at a Catholic school, said that her retirement plan was administered by the “church conference” and that she did not know any details about it.
- All participants had heard of early retirement incentives being given to people in other fields, but most had never heard of them being given to teachers.

Recommendations

- o Move items 13 and 14 before item 9, because switching the order in which respondents encounter items 9 and 13 may lessen how redundant they perceive those two items to be.
- o Consider eliminating item 12, unless there is important data that will come out of it.
- o In item 10, change the description of an early retirement incentive to “An early retirement incentive is a state or district policy that provides a monetary bonus or reward to encourage teachers to retire.”

Items 15 and 16 (Former Teacher): Decision to Leave Teaching

Feedback From Participants

- *Subitem A.* Several participants felt that subitem A seemed strange, since it so clearly did not apply to them. One felt that subitem A should not be first because she believed it was a relatively unlikely option.
- *Subitem F.* One participant thought that the inclusion of this subitem as a reason for leaving teaching was inappropriate; she felt that if teachers “took a break” from teaching, they would be able to identify some other reason for doing so. One participant did not interpret this subitem as meaning “temporary”; she rated it as “very important” even though she had no intention of returning to teaching.
- *Subitem K.* One participant said that this subitem should be broken down further because there are so many reasons that teachers could leave the field. In particular, she commented that this subitem would not be able to distinguish between teachers who simply “weren’t cut out for teaching” and those that had simply become frustrated with recent developments in the field (e.g., loss of classroom autonomy).
- Before viewing this item, participants were asked to brainstorm reasons that teachers (including themselves) would leave teaching. The following reasons were mentioned by more than two participants:
 - low salary (5 participants);
 - safety (4 participants);
 - old/tired (3 participants);
 - recent changes (job becoming more bureaucratic, less creative) (3 participants);
 - lack of support from the administration (3 participants);
 - workload (3 participants);
 - pressure on teachers from state/district assessments (3 participants);
 - spouse retired (3 participants); and
 - need to care for family member (3 participants).
- In two cases (out of 11 participants who answered this item), respondents’ three answers to item 16 did not match their highest-ranking answers in item 35. However, their first answer to item 36 always matched their highest-ranking answer in item 15.
- Two participants who were retired seemed confused as to why they would be asked this item; they thought that they should be able to skip it by saying that they chose to retire. Another thought that retirees should only have to answer items A, C, D, E, K, and L.
- *Subitem D.* All participants felt that the meaning of this subitem was clear. One, however, felt that this subitem should be eliminated because it does not identify why the respondent retired.
- *Subitem E.* Most participants did not have any difficulty interpreting this subitem. One rated it as “somewhat important” because a principal was assigned to her school with whom she did not get along.
- *Subitem L.* Two participants rated this as “slightly important” or higher; in both cases they left teaching to care for an ailing parent.

- *Subitem 16*: Several participants left the third space blank because they could identify only two reasons for why they left teaching.

Recommendations

- o Change the wording of subitem A to “Change in residence.” This would make the wording more parallel to the other subitems in this item.
- o Eliminate subitem F. Some participants had difficulty answering the question (see above), and respondents’ intentions to return to teaching will be captured in other questions in the survey.
- o Add an additional subitem to item 15: “Dissatisfied with some aspect of my last school or teaching position.” When asked to identify reasons why teachers leave the field, a number of interview participants mentioned factors that fall into this category (e.g., safety, lack of administrative support, etc.)
- o In item 16, only ask for respondents’ most important reason for leaving, not their second or third most important reason. This will eliminate some problems in analysis, since the reasons respondents list as second or third most important in item 16 will sometimes not be consistent with their answers to item 15.

Item 17 (Former Teacher)/Item 27 (Current Teacher): Last Year's Teaching Position and Item 9 (Current Teacher): Current Teaching Position

Feedback From Participants

- *Subitem I.* Participants interpreted this subitem in two different ways. Most thought of this subitem as the amount of freedom that they had in their teaching. Five of the 21 participants who answered these subitems, however, answered this subitem in terms of their “classroom management,” that is, the degree to which they are able to keep students on task. These teachers focused on the word “control” in the subitem, rather than the word “autonomy.”
- *Subitem L.* Participants who disagreed with this subitem did so for two very different reasons. Some disagreed because they did not feel that mainstreaming made it difficult for them to teach, while others disagreed because there was no mainstreaming in their schools.
- Before viewing item 17, participants were asked to list factors that determined whether teachers were satisfied with their working conditions. The following were mentioned by four or more teachers:
 - support from administration (14 participants);
 - physical facilities/cleanliness of school (11 participants);
 - sufficient materials/resources (10 participants);
 - support from other teachers (8 participants);
 - salary (6 participants);
 - parent involvement (5 participants);
 - class size (5 participants);
 - workload/amount of paperwork (4 participants);
 - collaboration with colleagues (4 participants); and
 - recognition/appreciation from administrators (4 participants).
- Two participants complained that they wanted an answer choice between “strongly agree” and “somewhat agree” called simply “agree.” They said that to them “somewhat agree” implied that they did not completely agree and “strongly agree” meant that they felt strongly about that particular issue. They wanted to be able to say that they simply felt the statement was true.
- *Subitem H.* Participants interpreted “teaching workload” very broadly. In addition to “teaching-related” activities such as planning and correcting papers, most teachers thought of their workload as including tasks such as parent conferences, meetings, and paperwork.

Recommendations

- Reword subitem I as follows: “I am satisfied with the amount of autonomy I have in choosing teaching strategies and techniques.” This change would clear up the interpretation of this subitem (see above).
- If subitem L is to be included, it must be preceded by a screening question that asks respondents if special needs students are mainstreamed in last year’s school or their current school.

Item 18 (Former Teacher)/Item 28 (Current Teacher): Last Year’s School and Item 10 (Current Teacher): Current School

Feedback From Participants

- *Subitem E.* One participant recommended that the words “in this school” be added to the end of subitem E. She worried that without this change teachers would be reluctant to agree with this statement for fear of reflecting badly on their own classes.
- As in item 17, two participants complained that they wanted an answer choice between “strongly agree” and “somewhat agree” called simply “agree.” They felt that “somewhat agree” implied that they did not completely agree, and “strongly agree” meant that they felt strongly about that particular issue. They wanted to be able to simply say that they felt the statement was true.
- *Subitems B, C, and D.* Because these subitems all relate to security, participants were asked whether they found the subitems redundant. Almost all participants did not, and thought that all three subitems should remain in the question.
- *Subitem M.* Teachers interpreted the phrase “professional caliber of colleagues” in slightly different ways. In this subitem, teachers most commonly thought that this subitem was referring to their colleagues’ “professionalism” (e.g., good manners, appropriate dress, etc.). Some teachers thought that it referred to their colleagues’ skill or ability as teachers, or to the level of advanced degrees they had achieved.
- *Subitem N.* Almost all teachers interpreted this subitem as asking whether they had enough time during the school day to meet and plan with other teachers.
- *Subitem P.* Most teachers, particularly those in elementary and middle schools, assumed that “professional advancement” meant moving out of teaching and into administration. Some felt that there were other ways to advance, including earning higher degrees, being selected to teach in elite programs, or becoming a “team leader.”

Recommendations

- o For the reason described above, reword subitem E as follows: “Student behavior is a problem at this school” (or “was a problem at last year’s school”).
- o Consider rewording subitem M so that respondents will interpret it consistently.

Item 20 (Former Teacher)/Item 30 (Current Teacher): Last Year's Instructional Leader and Item 12 (Current Teacher): Current Instructional Leader

Feedback From Participants

- *Subitem F.* Teachers interpreted this subitem in two different ways. Most thought the phrase “student evaluation results” meant standardized assessments, classroom tests, or report cards. Four, however, interpreted the phrase to mean student evaluations of teachers.
- *Subitem G.* In general, teachers had difficulty with this subitem and did not like the phrase “broad agreement among the teaching staff.” Some assumed that “broad agreement” meant consensus, and said that this was an impossible task. Two noted that the other subitems in this question measure the degree to which leaders encourage or facilitate things in a school, rather than whether they accomplish them; they felt that this subitem should be reworded accordingly.
- No participants had trouble understanding the directions to this item, or had difficulty identifying an “instructional leader.” All participants thought of a single instructional leader as they answered all subitems in this item.
- All 15 elementary and middle school teachers who answered this item chose their principal as the leader for this item. High school teachers chose leaders in a variety of positions; two chose their principals, one chose a Dean of Academics, one chose the resource teacher, and one chose the “lead teacher of his team.”
- Most participants felt that the instructional leader they chose was responsible for performing all the subitems on the list, although one who did not choose a principal noted that sometimes his “leader” was told what to do by higher administrators.
- One participant said that for some subitems he had not observed how effective his instructional leader was; in those cases he selected “somewhat effectively.”
- *Subitem C.* Teachers did not have a problem answering this subitem. However, upon re-reading the subitem, a number of them noted that their leader does not actually help develop the standards, which are provided for the school from the state or district. Others (particularly those that teach in minor subjects, or in private schools) said that their leader does help develop standards.
- When teachers were asked if there were other aspects of instructional leadership that should be included in this item, the following suggestions were mentioned by more than one participant:
 - relationship with students (5 participants); and
 - encouraging parental involvement (3 participants).
- Some participants were asked to evaluate the following hypothetical subitem I: “Develops positive and respectful relationships with students”; 7 of 9 thought it was a good addition. However, staff recommends not adding this subitem, both because some “instructional leaders” may not interact with students, and because the rest of the subitems in the question deal with leaders’ relationships with teachers.

Recommendations

- o In subitem F, change the wording from “student evaluation results” to “student assessment results.” A number of participants were asked in their interviews if the phrase “student assessment results” was clearer; all but one said that it was.
- o Change the wording of subitem G to, “Worked to develop broad agreement among the teaching staff...”

Items 21–23 (Former Teacher)/Items 31–33 (Current Teacher): Assessments in Last Year’s School and Items 13–15 (Current Teacher): State or District Assessments in This Year’s School

Feedback From Participants

- One participant noted that, for Questionnaire for Current Teachers item 14, the timing of the survey might affect respondents’ answers. For example, his students have not participated in an assessment program yet, but will later in the year.
- *Subitem A.* Participants interpreted this subitem in two different ways. Most saw the subitem as asking whether they were given support in preparing students to take the assessments (i.e., by teaching them the skills and content that would be tested). About a third of the teachers, however, thought the subitem was referring to the administration of the test to students, rather than the preparation leading up to it. Some participants were also confused by the word “program” in this item and did not understand what it meant.
- *Subitems A and B.* One high school teacher said that these subitems were not relevant to her because students were not tested in the subject that she taught.
- The following hypothetical subitem F was recommended by one participant: “The content tested on the assessment matches the curriculum I teach.” Other participants who were asked this subitem felt that it was a good addition to the subitem and did not feel that it was redundant with subitem C.
- One participant said that it was difficult to answer this question because she would have given very different answers about her state assessments versus her district assessments. She chose to answer based on her state assessments. No other teachers brought this issue up.
- *Subitem D.* Almost all participants disagreed with this subitem, and most “strongly disagreed.” The most common reason given was that the assessments measure students’ test-taking ability, not their academic knowledge and abilities. Other reasons mentioned by more than one teacher included the following:
 - Students’ scores can be negatively impacted by factors outside of teachers’ control (e.g., parent behavior, “partying”).
 - Students from disadvantaged backgrounds do not have the vocabulary or life experience to understand some items on the test (i.e., “cultural bias”).
 - Non-English speakers and special education students are unfairly expected to take the same assessment.
- Before looking at this item, participants were asked to brainstorm strong opinions that teachers have about state or district assessment programs. The following were mentioned by at least four participants independently (out of 19 who were asked), and are not currently covered among the items on the survey:
 - I feel that I do not have enough freedom or autonomy in my classroom because I have to focus on preparing students for the assessments. (10 participants)
 - There is too much pressure put on students to do well on assessments. (5 participants)
 - There is too much emphasis placed on assessments by my school or district. (4 participants)
 - Assessments provide important information about what students are learning in school. (4 participants)

- Too much time in the school year is devoted to giving assessments. (4 participants)
- The assessments are too difficult for my students. (4 participants)

Recommendations

- Reword subitem A as follows: “I did not receive adequate support in preparing my students for the assessment.” This change will ensure that respondents interpret this subitem consistently.
- Eliminate subitem B because, given the new wording of subitem A, respondents will be unlikely to disagree with this statement.
- Add an additional subitem to this item: “The content tested on the assessments matches the curriculum I teach.”
- Reword Questionnaire for Former Teachers item 22 and Questionnaire for Current Teachers item 32 as follows: “LAST SCHOOL YEAR, did any of your students participate in a REQUIRED state or district assessment program in at least one subject that you teach?”
- Reword Questionnaire for Current Teachers item 14 as follows: “THIS SCHOOL YEAR, will any of your students participate (or have they participated) in a REQUIRED state or district assessment program in at least one subject that you teach?”
- In Questionnaire for Current Teachers item 15, eliminate subitem D because most teachers will not be able to answer this question for assessments given in the current year.

Item 25 (Former Teacher): Comparing Last Year's Teaching Position to Current Non-Teaching Job

Feedback From Participants

- *Subitem K.* Most participants interpreted this subitem to mean benefits such as health insurance and retirement plans. However, some thought primarily of other “psychic” benefits, such as a more positive work environment.
- *Subitem R.* Of seven people who answered this subitem, three felt that the phrase “professional caliber of colleagues” referred to educational level or advanced degrees. Two interpreted it to mean the quality of their colleagues’ work, and two others thought it was asking about colleagues’ professionalism (e.g., coming to work on time, professional dress, etc.). Two participants said that they found it very difficult to compare the “professional caliber” of colleagues in two different fields.
- Two participants said that due to the nature of their jobs they wanted to be able to select “not applicable” on some subitems. One was a nanny who wanted to select “not applicable” for subitem L, “Procedures for performance evaluation,” and the other was self-employed and wanted that option for subitem F, “recognition and support from managers,” and subitem L.
- *Subitem B.* Most participants interpreted “professional advancement” as a move into administration; others interpreted it as the achievement of an advanced degree.
- *Subitem C.* Participants interpreted this to mean coursework, conferences, workshops, or trainings. They saw the difference between subitems B and C as being that “professional advancement” leads to a new position, while “professional development” referred to getting better in your current position. Some also felt that the implication was that “advancement” improved your salary, while “development” did not necessarily.
- *Subitem P.* Participants interpreted the phrase “general work conditions” in a number of ways. Most thought the subitem was referring to the cleanliness and upkeep of physical facilities. Others felt the subitem was asking about the people that teachers work with, the “climate” of the workplace, the amount of autonomy or control teachers have over their work, or their relationship with their administrator or manager.

Recommendations

- o Change the heading of the third column from “No difference” to “No better/worse in either position.” This would allow for the possibility that the two positions are different, but that neither is better as a whole. (See participant comments for Questionnaire for Current Teachers item 37.)
- o Reword subitem B as follows: “Opportunities for professional **ADVANCEMENT** (i.e., promotion).” This change will make the subitem clearer for respondents, and this is the way that professional advancement is already defined in Questionnaire for Former Teachers item 18 and Questionnaire for Current Teachers items 10 and 28.
- o Move subitem K directly under subitem A, and reword it as follows: “Benefits (e.g., health insurance, etc.)” This would ensure that respondents would focus on fringe benefits and not consider other “psychic” benefits in their answer.

- o Eliminate subitem R; based on the feedback received from participants in interviews, it will be difficult for respondents to compare the “professional caliber” of teachers with employees in a different field.

Items 27a–c (Former Teacher)/Items 38a–c (Current Teacher): Education Activities

Feedback From Participants

- When asked if there were additional answer choices that should be included in item 27b, several teachers pointed out that most teachers must periodically take classes as part of their certification requirements. Those that had taken classes for this purpose answered “1: Individual courses” for item 27b and “1: To obtain or for use in a K–12 TEACHING POSITION” for item 27c. Participants suggested that including another choice (e.g., “Courses required for certification”) would help distinguish between teachers who took education classes for their own interest and those who were “forced to.”
- Participants felt that these three items were very clear, and none had any difficulty answering any of them.
- Most teachers were unsure what was meant by answer choice 7, “Certificate of Advanced Graduate Studies program.” They interpreted it to be a step above a Master’s degree that would provide the additional skills and certification to enter a more specialized position, such as that of an administrator or reading specialist.

Recommendations

- o In item 27c, change the answer choices to the following:
 1. To obtain a teaching certificate
 2. To renew or maintain a teaching certificate
 3. To obtain or for use in a position in the FIELD OF EDUCATION but NOT AS A K–12 TEACHER
 4. To obtain or for use in a position OUTSIDE THE FIELD OF EDUCATION
 5. For other reasons (e.g., personal fulfillment or interest)

Items 28–32 (Former Teacher): Possibility of Return to Teaching

Feedback From Participants

- *Subitem A.* Several teachers were confused by the use of the word “seniority,” which they did not associate with a pay scale.
- *Subitem E.* A number of teachers felt that this subitem did not need to be included, since it seemed obvious that the availability of a position would influence whether or not they returned to teaching. They did not have this issue with subitem D, which they saw as important because it would measure teachers’ interest in working part time.
- One participant warned that to some teachers the phrase “base-year teaching salary” means the salary that is given at the lowest rung of the district salary scale.
- Of 11 participants who were asked this item, 4 answered that they would consider returning to teaching, but 2 of these said that they would only return to teaching at the postsecondary level.
- *Subitem B.* This subitem was interpreted in different ways by retired and non-retired teachers. Retired teachers took this to mean that they would be able to return to teaching while still collecting their pensions (and retaining retirement-level health benefits, etc.). Non-retired teachers had more difficulty interpreting it because most knew very little about their retirement benefits; one saw it as being able to put back into her pension the money that she had taken out when she left teaching.
- *Subitem C.* This subitem was clear to all participants. One noted that even within her own state, one factor that would influence her decision to return would be how easy it would be for her to have her certification reinstated.
- Of 11 people who answered item 31a, 10 answered that they would not return for an increase in salary. The one participant who answered “Yes” provided a figure of \$38,000 in item 31b.
- When asked what other factors might influence their decision to return to teaching, participants mentioned a number of school-based factors, including amount of support provided by administrators, amount of classroom autonomy they would have, class size, being able to teach a particular grade or subject, and characteristics of the student population. No single factor was mentioned by more than one participant.

Recommendations

- o Reword subitem A as follows: “Ability to come back at same or higher level on the salary scale.” A number of participants were asked if this wording would be clearer than what is currently on the survey; all thought that the new wording was better or no worse than the old wording.
- o Eliminate subitem E because teachers had difficulty interpreting how they should answer this subitem. Since the purpose of this subitem is to determine how eager teachers are to return to teaching, it should be made into a separate question; the “importance” scale is inappropriate. One possible wording of this subitem would be, “If a full-time teaching position were currently available at a school in your area, would you apply for it?”

- o Reword item 28 as follows: “Would you consider returning to K–12 teaching?” Also, eliminate answer choices 1 and 5 from item 29. These changes would ensure that respondents who answered items 30, 31, and 32 would be thinking only about K–12 teaching as they did so.
- o Reword item 31b as follows: “What is the lowest teaching salary you would accept to return to teaching?”

Items 36–37 (Former Teacher)/Items 52–53 (Current Teacher): Marital Status

Feedback From Participants

- No participants had any difficulty interpreting or answering these questions. When asked to interpret the use of the word “partner” in item 37b, participants said that it referred to a boyfriend or girlfriend, a “significant other,” a “live-in,” a “lover,” or a “mate.”
- Staff interviewed two teachers who self-identified as gay or lesbian. Both said that they liked the wording of item 37b and found it to be inclusive. One noted that the word “partner” was preferable to “significant other,” a phrase which, in her mind, minimized the importance of gay or lesbian relationships.

Recommendations

- o OCR has no recommendations for these items; all respondents found them clear and easy to understand.

Item 6 (Current Teacher): Teaching Certificate

Feedback From Participants

NOTE: The participants who answered this question were from Maryland, Alaska, Maine, New Hampshire, New York, North Carolina, Virginia, and the District of Columbia.

- Most teachers did not have difficulty answering this item; almost all chose option 1. However, when asked to carefully read the rest of the answer choices, many commented that the distinctions between them did not seem clear.
- Most participants felt that option 2 (“probationary”) was fairly clear, although none thought that their states offered such a certificate. Participants thought that what distinguished option 2 from 3, 4, and 5 was that a teacher would receive a regular certificate after a certain period of time—no other coursework was required.
- Most participants had difficulty distinguishing between options 3 and 4. Almost none had heard of an “alternative certification program” in their states, and most were unsure how participation in such a program would differ from the coursework, student teaching, and/or testing described in option 4.
- When asked about option 5, most said that they had heard of “waivers” being given to teachers in high-need areas or subjects. However, almost all felt that the description given in option 5 seemed similar to that provided for option 4.
- Some teachers felt that the labels given to each choice (“probationary,” “provisional,” etc.) might be misleading. For example, two Maryland teachers initially answered that they had “provisional” certificates. However, upon going back and re-reading the descriptions of each answer choice, they said that the Maryland “provisional” certificate is actually closer to the description given for option 4.
- Option 6: Most teachers were unsure as to what this option meant. Some thought that it referred to National Board certification, but the one teacher interviewed who is certified by the National Board chose option 1 because she still has a state-issued certificate. Other participants thought that option 6 meant that the teacher had been originally certified in another state. However, they pointed out that the item stem asks about a certificate in the current state. One participant chose option 6 because he got his teaching degree in a different state, even though his certificate was in his current state.

Recommendations

- o Staff recommends that no changes be made to this item for this year, because the answer choices must remain parallel with the Schools and Staffing Survey. However, staff does recommend that respondents who choose option 2, 3, 4, 5, or 6 always be aggregated for purposes of analysis because the interviews showed that the distinctions between them were not clear to teachers and therefore would not be valid.

Items 35–36 (Current Teacher): Decision to Leave Last Year’s School

Feedback From Participants

- *Subitem A.* Participants felt that this subitem should be rephrased so that it also includes teachers who did not move but wanted to work at a school closer to their home.
- *Subitem G.* One participant was confused as to whether this subitem referred to changes in the job description between last year’s school and this year’s school or changes that occurred at last year’s school.
- In one case, a respondent’s three answers to item 36 did not match that respondent’s highest-ranking answers in item 35.
- Before they viewed this item, five participants were asked to list reasons that they or other teachers would switch schools. More than one teacher mentioned the following:
 - conflicts with administrators/lack of administrative support (4 participants);
 - location of new school is better (3 participants);
 - wanted to teach different grade level (2 participants); and
 - wanted to teach a different student population (2 participants).
- *Subitem E.* Three participants recommended that this subitem be split into different parts since it encompasses so many different factors.
- *Subitem M.* Participants who gave any importance to subitem M were referring to negative personal relationships with teachers, dissatisfaction with the student population at last year’s school, and lack of parental involvement.
- *Item 36.* One participant said that she could identify only two reasons why she left her old school; however, she eventually opted to include a third reason rather than leave a box blank.

Recommendations

- Subitem A should be reworded as follows: “This year’s school is closer to my home.” This would allow for the possibility that teachers had not changed their residence, but that proximity to their school was a factor in their decision to switch schools.
- Reword subitem G as follows: “I was dissatisfied with changes in my job description or responsibilities at last year’s school.”
- In item 36, ask only for a respondent’s most important reason for leaving, not their second or third most important reason. This will eliminate some problems in analysis, since the reasons respondents list as second or third most important in item 36 will sometimes not be consistent with their answers to item 35.

Item 37 (Current Teacher): Comparing Current Teaching Position to Last Year's Teaching Position

Feedback From Participants

- Two participants said that for certain subitems (I and U) there were differences between their positions last year and this year, but neither was “better.” They asked if the “No Difference” option could be rephrased so that it included this possibility (e.g., “Not Better or Worse in Either Position”).
- *Subitem B.* Most teachers assumed that “professional advancement” meant moving into administration since they took for granted that there is no opportunity for advancement within the field of teaching. One participant recommended that the subitem be reworded to read “Opportunities for professional ADVANCEMENT (i.e., promotion),” as in subitem P in item 18.
- *Subitem K.* Most participants interpreted this subitem as referring to health and life insurance, pension plans, etc. However, some thought that it was overly broad, and said that they also considered “benefits” to include other things such as peace of mind or a less hectic workload. They suggested that the subitem could be rephrased to read “Benefits (e.g., health insurance, etc.)” They also said that if this subitem came immediately after “Salary,” the meaning of this subitem would be clearer.
- *Subitem R.* Teachers interpreted the phrase “professional caliber of colleagues” to mean a number of different things. Most commonly teachers interpreted this phrase to mean the skill or quality of fellow teachers, or their “professionalism” at work (e.g., good manners, not arguing with other teachers in front of students, appropriate dress, etc.) A few teachers also thought the subitem referred to whether their colleagues had advanced degrees.
- All teachers understood the directions for this item clearly. One teacher who had not changed schools in the past year felt that there was a danger that teachers who were in his situation might skip this item because they did not see how it applied to them. However, staff does not recommend any changes to the directions because participants did not seem to have any problem.
- *Subitem A.* Several teachers answered “Better in Current Position” because they had not changed positions but did receive a raise. Other teachers in the same situation answered “No Difference” because they assumed that the subitem was not asking about their raises.
- *Subitem C.* Teachers felt that the difference between subitems B and C was that “professional advancement” leads to a new position, while “professional development” is related to getting better in the current position.
- *Subitem G.* One participant questioned whether this subitem was referring to teachers’ safety from people (e.g., students, parents, etc.) or safety from the disrepair of the school building (e.g., exposed wires).
- *Subitem N.* Teachers consistently interpreted this subitem as referring to their workload at school, and whether they had to take work home. One felt that subitem N was redundant with subitem M, “Manageability of workload.”

- *Subitem P.* Teachers interpreted the phrase “general work conditions” in a number of ways, including the upkeep or cleanliness of the building, the “atmosphere” of the school (or whether it is a “pleasant place to be”), their workload, how well they get along with their colleagues, and whether they have sufficient resources.

Recommendations

- o Change the heading of the third column from “No difference” to “No better/worse in either position.” This would allow for the possibility that the two positions are different, but that neither is better as a whole.
- o Reword subitem B as follows: “Opportunities for professional ADVANCEMENT (i.e., promotion).” This change will make the subitem clearer for respondents, and this is the way that professional advancement is already defined in Questionnaire for Former Teachers item 18 and Questionnaire for Current Teachers items 10 and 28.
- o Move subitem K to be directly under subitem A, so that its meaning will be clearer from context. Also, reword subitem K as follows: “Benefits (e.g., health insurance, etc.).”
- o Consider rewording subitem R so that teachers will interpret it consistently.

Items 39–40 (Current Teacher): Possibility of Leaving Teaching

Feedback From Participants

- *Answer choice 3.* Two of the 7 participants who answered this item commented that the wording was “harsh.” One of them would have picked this option but did not because he thought doing so would have been “insulting” to the field of teaching.
- *Answer choice 3.* Two participants did not like the use of the word “probably” in this answer choice because it sounded “wishy-washy”; they thought it should be removed.
- When asked if there were other choices that should be included in item 39, several teachers suggested that there be an option for teachers who plan to continue until “a life event,” such as pregnancy, marriage, or their children leaving home.
- *Item 40.* None of the participants answered “Yes” to item 40. One noted that teachers might have a bias against saying that they were trying to “leave the profession” because they might feel guilty.
- *Item 40.* Participants were unclear how administrative jobs fit into item 40. Almost all felt that administrative jobs were not “outside the profession,” but they found the wording of this item confusing.

Recommendations

- o Change the wording of answer choice 5 to “Will continue unless a more desirable opportunity comes along.” Respondents felt that this alternative sounded less pejorative and harsh.
- o Add an option between 3 and 4: “Until a specific life event occurs (e.g., parenthood, marriage, etc.).”
- o Reword item 40 as follows: “In the last year, have you applied for a job in an attempt to leave classroom teaching?” Add a bullet that says, “Answer ‘Yes’ if this job would require that you leave the classroom, even if it is for another position in education (e.g., school administration).”

Items 41–43 (Current Teacher): Retired/Rehired Teachers

Feedback From Participants

- One teacher commented that item 42 was confusing because it referred to teachers retiring and then “continuing” to teach, but it does not allow for the possibility that they could have taken a break before coming back.
- All teachers who had previously retired and then returned to teaching answered “No” to item 42 because they do not consider themselves to be retired.

Recommendations

- o Change item 41 to the following: “Some teachers retire from teaching, but then return to the classroom. Have you previously retired from a teaching position?”
- o Change item 42 to the following: “Have you ever collected a pension from a state or district retirement system?” It would be possible to add the following follow-up item for those who answer “Yes”: “Are you currently collecting a pension from a state or district retirement system?” However, given the small sample of the TFS, it may not be necessary to distinguish between teachers who received a stipend in the past and those who currently do so.

Appendix D. Summary of TFS Pretest and Usability Test Findings and Recommendations

The material in this appendix was prepared by Shawna Cox of the U.S. Census Bureau and delivered November 9, 2004. It includes the following sections:

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Background

The Teacher Follow-up Survey (TFS) is a nationally representative sample survey that looks at teacher movement within the labor force. The TFS sample is made up of a selection of teachers who participated in the previous year's Schools and Staffing Survey (SASS). The survey identifies three categories of movement within the teacher labor force: Stayers (teachers who continue to teach at the same school); Movers (teachers who are still teaching but at another school); and Leavers (teachers who have left the K–12 teaching profession either to retire or to enter another profession).

Prior to this research, in April 2004, over 30 cognitive interviews were conducted to evaluate new and revised items in the Questionnaire for Former Teachers and Questionnaire for Current Teachers. Significant revisions were made to the questionnaires based on the results of this test. See “Appendix C. Summary of TFS Interview Findings and Recommendations.” The questionnaires were significantly revised based upon this research.

TFS consists of three forms:

- Teacher Status Form (Form TFS-1), which is used to identify sampled teachers and determine if they are a mover, stayer, or leaver;
- Questionnaire for Former Teachers (Form TFS-2), which is for leavers; and
- Questionnaire for Current Teachers (Form TFS-3), which is for stayers and movers.

The U.S. Census Bureau conducts TFS for the National Center for Education Statistics (NCES). At the request of the Office of Management and Budget, an internet reporting option was developed for the 2004–05 administrations of TFS. The internet instrument combined the former and current teacher questionnaires into one instrument, utilizing automated skip patterns to present respondents with the items appropriate to their status.

Research Questions

The goal of this research was twofold. First, it was used to test the usability of the instrument. Second, it was used to test the revised questionnaire wording.

The primary questions to understand the usability of the instrument were as follows:

- Could respondents successfully log in and use the internet version of the instrument?
- Was navigation through the instrument clear and efficient?
- Did the radio buttons present any challenges to respondents (e.g., inability to clear responses)?
- Were the edits clear, helpful, and appropriate for respondents?

Questionnaire wording issues included the following:

- Were respondents able to interpret the questions uniformly?
- Were respondents able to provide the information requested?
- Were respondents able to accurately answer the retirement series of questions?

Methodology

Trained Census Bureau researchers conducted 24 usability interviews with stayers, leavers, and movers from a variety of schools. Complete details can be found in exhibit D-1. Respondents received a \$50 payment for participating in the research.

- Interviews were conducted in the Census Bureau usability lab or the respondents' homes or workplace.
- At least five respondents participated using a dial-up internet connection.
- No more than two respondents from the same school were recruited for this study.

Exhibit D-1. Respondent characteristics, by teaching status and internet access: 2004

Teaching status and internet access	School type	Other criteria	Respondent ID	Number of respondents
Total				24
Teaching status				
Stayer	Public	Continue to teach at same school	2, 8, 13, 14	4
Stayer	Private	Continue to teach at same school	4, 6, 11, 17	4
Current (stayer/mover)	Public	Retired and returned to teaching within past 2 years	†	0
Current (stayer/mover)	Private	Retired and returned to teaching within past 2 years	†	0
Mover	Public	Still teaching but at another school	1, 10, 15, 18	4
Mover	Private	Still teaching but at another school	5, 20, 21	3
Leaver	†	Another education position (not K–12 teaching; e.g., moved to administration or postsecondary teaching)	7, 16, 22	3
Leaver	†	Left teaching within past 2 years to pursue other career	9, 19, 23	3
Leaver	Public	Retired from teaching within past 2 years	3, 12, 24	3
Internet access				
Dial-up connection	†	†	—	8
High-speed connection	†	†	—	16

† Not applicable.

— Not available.

SOURCE: *Summary of TFS Pretest and Usability Test Findings and Recommendations*, U.S. Census Bureau, 2004.

Detailed Findings and Recommendations

Login

Feedback From Participants

- Four respondents mentioned that they would have liked to know the estimated amount of time the survey would take to complete before they began taking it. Respondent 9 suggested that this information be available on the Login page.

Recommendations

- The estimated length of time to take the survey should be included on the login screen, if it is not already included in the letter to the respondent or on the NCES background information page.

Form Actions Menu—Beginning the Survey

This initial page suffers from many usability problems. It is cluttered with information that is not relevant to the respondent's task of taking the survey.

Feedback From Participants

- All 24 respondents mentioned that this page was either “unclear” or “confusing.” Frequent remarks included:
 - “I am confused” (respondent 1).
 - “I am not sure what I am supposed to do here” (respondent 9).
 - “I don't get it. I am not sure what I'm supposed to do here” (respondent 12).
 - “This is not clear to me” (respondent 24).
- Respondent 7 immediately mentioned, “Most of the options on this page are not needed before starting the survey.”
- Respondent 22 did not realize that the “Go” buttons would do anything. She thought that they were simply graphics. She mentioned that there should be some indication that the buttons will perform an action, for instance, the cursor should change to a hand when it is moved over the “Go” button to make its purpose obvious.

“Getting Started:”

- Respondents 4 and 19 immediately clicked on the “Getting Started” hyperlink, expecting that it would begin the survey. “Getting started” opens up a new browser window, which is the same page that opens when user clicks on “Help.” One said that this was “redundant.” Another skimmed this menu and told the researchers that there are “too many directions at the beginning.”

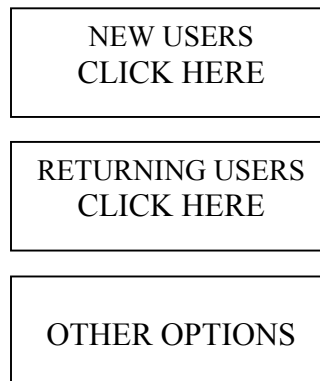
“Go” to Form

- The majority of respondents scrolled up and down through the go to section dropdown box and showed the following signs of trouble, confusion, and misunderstanding:
 - Respondent 2 skipped over the directions that say new users should start with section 1, and instead began scrolling up and down the list of sections. She read the names of the sections

- aloud and said things like, “Outside the US? That’s not right because I don’t live in another country.”
- Respondent 7 was confused by this wording and said, “It’s a survey, not a form.” She mentioned to the researchers that the page should have two options: to begin or to resume. From this page she suggested that if respondents wanted to resume, the next page should have a menu that would direct them to specific questions in the survey.
 - Respondent 9 began scrolling through the menu of sections and after a while she read the instructions, which say to begin with section 1.
 - Respondent 11 did not immediately follow the directions to begin in Section 1. She clicked on the dropdown list, and selected section 25, “Teach in a Private School,” thinking that she was answering a question rather than navigating to a section.
 - Respondent 19 immediately clicked on the go to section box and scrolled around for a brief moment. Then she said, “Maybe I should read the directions first.”
- Of the 24 respondents, 4 clicked the dropdown menu and wanted to be able to highlight a section and immediately be sent there. After they selected their desired section, there was a long pause and nothing happened. They were unaware that they had to click on the “go” button. Respondent 11 tried hitting the “Enter” key on the keyboard after choosing the appropriate section. Respondent 16 asked the researchers, “Am I supposed to push go?”
 - Respondents 3 and 23 mentioned that the first “Go” button is in a confusing location. One of them paused and said, “Where do I click?” She mentioned that the “Go” button should be next to the dropdown box because it is confusing to have to go back up and click on “Go.”
 - Respondents 22 and 24 told researchers that they clicked “Go” because it was the first button to click. One respondent mentioned that this should be made clearer—it should say “START HERE” rather than “Go.”

Recommendations

- The page should be set up as follows:



New users will click the top box; returning users will click the middle box that should bring them to a new page that returns to the section where they left off; all other options can be found by clicking on the bottom box. It will eliminate the confusion about where to click to begin the survey, and users will not be confused by unnecessary options such as “Go to section,” “Form Status,” or “Generate Report.”

Many users were misled by the “getting started” link. This link should more clearly state that it is actually a help menu by being labeled, “information on how to begin the survey.” However, researchers recommend that this link be omitted all together. This page should be simplified so that additional instructions are unnecessary.

- Next to a “go to section” dropdown box, it should be made clear that after selecting a section, the user should click “go.” Researchers suggest that the instruction, “Select section then click ‘go’” should be included.

Navigation and Other Usability Issues

Feedback From Participants

“Save & Next”

- Many of the respondents initially had difficulty finding the “Save & Next” button at the bottom of the screen. Once they figured this out the first time, they had no difficulty finding it again in the survey.
 - Respondent 1 chose her first answer and then tried pressing “Enter” to get to the next page. She acknowledged that this did not work, so she tried double clicking the mouse on her response. It took her several seconds to realize that the “Save & Next” button was in the Navigation bar at the bottom of the screen.
 - Three of the respondents clicked on the “Go” icon to move forward, rather than “Save & Next.” When Respondent 12 clicked on the “Go” button in the right hand corner, it brought her back to the initial Login page. She somehow went to a page that the developers used to look at all their surveys at once. It appears to be the same as the normal login page, but the dropdown list includes every survey they design. She logged back in, but was brought to a survey called Boundaries and Annexation.
 - Four of the respondents told researchers that they expected the “Save & Next” button to be on the bottom right-hand side of the screen.
 - In reference to the Navigation tools, respondent 13 said, “This is confusing. If you just want people to take the survey, all you need is a ‘save and next’ button.”

“Previous”

- There were no problems when respondents used the “previous” button at the bottom of the page to navigate. However, most of the respondents used the “back” button on the browser instead of the “previous” button in the navigation tools. This logged out respondents 14 and 18 and brought them both back to the initial login page. About halfway through the survey, respondent 2 began using the “previous” button instead of the “back” button.
- Whenever respondent 23 wanted to go back to a previous page, she would press Ctrl-H and look at the internet history. She would then go back to the login page, log back in, and return to the survey.

“Other Navigation Options”

- Most respondents did not notice the option to jump to different sections of the survey.
 - Respondents 7 and 23 mentioned that if they wanted to go back to check another question, they would have to flip through all of the previous pages, which would involve “a lot of

clicking.” One respondent told the researchers that there should be a menu on the right-hand side of the screen from which users can choose a certain section to go to. She did not see that this Navigation menu actually does exist at the bottom of each page, but when she noticed it, she said it was unclear and recommended it be moved to another location on the screen.

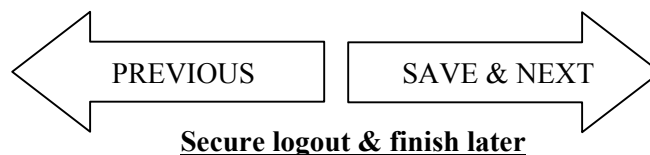
- Respondent 9 looked at the navigation portion of the screen and said “I wonder what other navigation is.” She clicked on the menu and saw that it was the same sections menu that she looked at on the previous page. She mentioned that she would not use this navigation tool to skip around to different sections on the survey because she would be afraid that her results would change or get “messed up.”
- Respondent 19 did not notice the other navigation options until researchers asked her to explain the screen elements at the end of the interview. Once she saw them, she told us that it was good to have the option to jump around the survey, especially if trying to go back to fix things.
- Respondent 14 was trying to get to the “form status” page, the last page of the survey on which the respondent signifies whether he or she is finished. She expected to see this section at the bottom of the dropdown navigation list, but it was not there as an option. In order to make sure that the survey was finished, she went to section “contact information” and clicked “save & next,” which brought her to the form status page.

Errors

- Throughout the survey there were several times when the respondent received an error message and either did not notice it or was unsure where the error occurred. The following are examples of this:
 - Respondent 12 typed in 1200.00 as her salary. The decimal led to an error. She finished the page and clicked “Save & Next.” This caused the page to reload with a warning at the top, and she never read it. Researchers had to guide her along to the box to correct it. She also never noticed the “Ignore Problems” check box at the bottom of the page.
 - One respondent did not know her contact’s complete information offhand. She filled in what she could and left the rest blank. The respondent did not follow the telephone number example and simply input the 10 digits without dashes. She received an error message and incorrectly thought that the error on the page was that she left things blank. She filled them in with miscellaneous information, then realized that there were error messages next to the two telephone areas. The reason for the error was not clear to her.
 - Respondent 21 received a consistency error message on a screen towards the end of the survey that was caused by the box next to “1st grade” being checked on a question much earlier. The error message he received was not helpful because it did not specify directly what screen contained the error. It simply informed him that he could not teach a grade that was not offered at the school. This respondent was tempted to input an incorrect answer to make the error go away. He mentioned that it would be helpful if the error messages indicated the exact location of where each error occurred. In the end, he decided to submit the survey with some errors remaining.

Recommendations

- The “Navigation” portion of the screen should be changed and should appear as follows:



Designing these buttons in the shapes of arrows should eliminate confusion about how to move to the next question in the survey as well as eliminate usage of the “Back” button in the internet browser (which did cause a few problems for some users). These arrows should be centered at the bottom of the page.

- o The “Other navigation” dropdown list should be removed. It should be found on the “Form Status” page at the end of the survey, so that respondents can use it to easily jump to the pages that contain errors.
- o A “secure exit” option should be on the bottom of each page. It should be labeled “Secure Logout & Finish Later.”
- o Error icons should be made larger, the fonts should be larger, and both should be in more vivid colors to increase their visibility to the respondent.
- o The error messages should be more detailed, giving the respondent a more complete idea of where and why the error occurred.
- o Consistency edits should be removed unless the items are near one another.

Current Teaching Status (Questionnaires for Current and Former Teachers)

Do you CURRENTLY TEACH any regularly scheduled class(es) in any of grades pre-K–12?

Feedback From Participants

- Respondent 23, a former teacher who is now a substitute teacher, found this question confusing. She clicked “no” then clicked “yes.” She was unsure if she was a teacher teaching “regularly scheduled” classes.

Recommendations

- o In order to reduce the confusion about whether or not a short-term substitute teacher “currently teaches regularly scheduled classes,” add a bullet below the question which states, “Click ‘No’ if you are a short-term substitute, student teacher, or teacher aide.” Change this item on the paper version of TFS as well to maintain consistency.

Classify Your Position (Questionnaires for Current and Former Teachers)

How do you classify your position at your CURRENT school, that is, the activity at which you spend most of your time during this school year?

Feedback From Participants

- Of 24 respondents, 3 felt that multiple options applied to them at this screen but that they were only allowed to pick one. One of the three could have been a “regular teacher,” an “administrator,” or “Other professional staff.” He decided not to choose the “Other professional staff” option because his specific duties were not listed in the parentheses following that option.

Recommendations

- o Although short-term substitutes, student teachers, and teacher aides are addressed in the previous question, they cannot be removed from the answer choices because consistency between the paper and internet surveys must be maintained.

Transition From Teaching (Questionnaire for Former Teachers)

Which box did you mark in item 1c above? Last school year you reported teaching regularly scheduled classes. We are interested in learning more about your transition to a teacher aide, student teacher, or short-term substitute teacher. Please briefly explain the reason for the change below.

Feedback From Participants

- Two respondents answered this question. They both encountered problems:
 - o Respondent 12 thought the write-in box for the reason for transition was actually a drop box that gave her options. She tried to scroll and nothing happened. She typed in an explanation that included that she loves teaching now because she gets to fulfill her teaching needs, without all of the hard work. Her explanation was too long and she received an error message on the next page. She, as well as the other user, indicated that she would like to know the limit for what she can write.
 - o Respondent 23 practically wrote an essay describing her reason for the transition from full-time teaching to substitute teaching. After typing her response, she went to the next page, which gave her a warning message because her previous response was too long. She did not notice this warning. It should either be made more prominent to the user or the question should mention the maximum character allowance.
- Neither respondent noticed or read the “Note” underneath the box that describes their position as being not a “regular teacher,” a statement that is crucial to accurately responding to the remainder of the questions in this survey.

Recommendations

- o The write-in box should be a single long line rather than a box. This way, it can indicate to users when they have run out of space by not allowing them to type anything else in the box.
- o The wording should be changed to “In 20 words or less, please explain the reason for the change below.”
- o The “Note” needs to be made more visible. It should be moved above the write-in box, and the colors and contrast should be changed so that it stands out more to respondents.
- o The wording of the error message should be changed to more specifically indicate the allowed length.

Occupation (Questionnaire for Former Teachers)

What kind of work do you do, that is, what is your occupation?

Feedback From Participants

- Respondents 16 and 23 were somewhat confused by the examples for job title because none were education related. Respondent 23 laughed at the examples. She thinks that they should only be education related, since the survey is given to teachers and former teachers. Although they did not like these examples, they were able to answer the question properly.

Recommendations

- o The examples of “occupation” are often different from the occupations former teachers enter. They should be changed from occupations such as “plumber, typist, or farmer” to occupations that might be more probable for teachers to transfer to such as an “accountant, nurse, or secretary.”

Duties (Questionnaire for Former Teachers)

What are your usual activities or duties at this job?

Feedback From Participants

- Three of the four respondents who completed this question wanted to enter numerous activities, but they were not able to do so.
 - o Respondent 7 wanted to enter numerous activities that would have included “liaising with colleges; advising foreign undergraduates, graduates, and physicians; and composing correspondence,” but this list was too long; she was forced to make it shorter and simpler.
 - o Respondent 22 paused when she was asked about her activities and duties. She mentioned that she had a lot of duties. She began typing “curriculum development, teacher training, grant wr” and ran out of space. She left it like this, and went on to the next page.
 - o Respondent 24 typed in her “usual activities,” the activities that she does most frequently at work, and they included, “typing, filing, accounting functions, customer serv-.” She was cut off because she wrote too much.

Recommendations

- o The answer box should be extended to allow respondents to enter their duties more easily.
- o “Selling cars, operating a printing press, and laying brick” should be changed to duties that a teacher would more likely perform after leaving teaching such as “filing, accounting, or serving customers.”

Current Teaching Status (Questionnaire for Current Teachers)

This school year (2004–05), how much time do you work as a TEACHER?

Feedback From Participants

- One respondent was a full-time teacher but also worked an outside job as a teacher and designer of an internet college course. Because she was a full-time employee, the skip patterns automatically skipped over the sections that deal with other occupations.
- Respondent 18 had split responsibilities, so he was not sure if he considered himself a full-time teacher, since part of the day he attended to nonteaching responsibilities. He mentioned that this question was “tricky” to answer.

Recommendations

- o If it is important to get additional information about respondents’ “other occupations” besides their earnings, consider removing the skip pattern here and allow all users to answer the questions concerning “other occupations.” Currently, respondents only answer these questions if they report teaching less than full time.

This school year, what is your MAIN teaching assignment field at your current school? (Your main assignment is the field in which you teach the most classes.)

Feedback From Participants

- Overall, the dropdown box seemed to work here, aside from a few specific cases where respondents had problems:
 - o After clicking the dropdown menu, three respondents did not realize that it scrolled down further. Once they did realize this, the list was so large that they actually had to scroll horizontally in order to click on the dropdown arrow.
- Some respondents finally picked subjects that were either the general category (general subject areas without codes), or subjects that somewhat mirrored their own.
 - o When respondent 4 opened the dropdown list, she said “whoa, hard” because there were so many choices. She selected “English and language arts” in the dropdown list, an item that did not have a code number. In reality she taught reading and neglected to choose this option from the menu. Choosing the subject heading did not give her an error message.
- Confusion about which teaching assignment is the “MAIN” assignment field caused problems for respondents who taught multiple subjects.
 - o One respondent taught three subjects, with her time divided equally among them. She wondered which one was her “MAIN” subject. She chose one of the three at random and moved on to the next question.

Recommendations

- o The format of this question should be changed. The dropdown box should be eliminated and in its place should be a table with all of the options presented. The respondent would then click on a radio button next to the correct option. This would eliminate the problems of respondents not knowing to scroll down and choosing items without codes.

Which of the following best describes the teaching certificate you currently hold in this state?

Feedback From Participants

- Respondent 8 was looking for a “National Board Certification” option. He correctly marked “state certificate” since he has that as well as the National Board Certification.
- One respondent mentioned that, in some states, provisional and probationary certificates are the same things. She mentioned that there should be fewer selections here because it is “wordy and unclear.”
- Respondent 17 told researchers that private school teachers are not required to be certified.

Recommendations

- o This question should remain as it is.

In which grades are the STUDENTS you teach at your current school?

Feedback From Participants

- Of the 24 respondents, 2 overlooked the directions that said, “Check all that Apply,” and told the researchers that some people teach more than one grade in a school.

Recommendations

- o This question should remain as it is.

Which statement best describes the way YOUR classes at your current school are organized?

Feedback From Participants

- Respondents 13 and 20 told the researchers that the options were poorly organized and that they found this page too wordy. Respondent 13 suggested that the phrases in parentheses should come first, and the explanations should be shortened and in parentheses. Also, the most general option should be listed first and subsequent options should be presented in an increasing degree of specificity.
- Respondent 17 said he was unsure if “classes” in the phrase “You instruct several *classes*” means actual classes or courses.

Recommendations

- o An example should be included to ensure the respondent knows that “classes” means how many specific *classes* he or she teaches, not how many different *courses* he teaches. For example, “1st period writing, 2nd period writing, and 3rd period reading. A total of 3 classes.”

Students with an Individual Education Plan or Limited-English Proficiency (Questionnaire for Current Teachers)

Of all the students you teach at your current school, how many have an Individual Education Plan (IEP) because they have disabilities or are special education students?

Feedback From Participants

- One public school teacher and one private school teacher did not know the answer to this question. One entered zero because she did not know the answer, and the other asked researchers if she could leave it blank.
- Other private school teachers were unsure about IEPs, because private schools usually do not have them. In particular, one private school mover told researchers that students who enter the school from a public school with IEPs have those educational plans rewritten upon admittance. He estimated his number from the percentage of the student body that has an individual learning profile.
- One current special education teacher said, “Special education teachers should not have to answer this question; it should be obvious that all of their students have an IEP.”
- The instruction indicates, “Enter zero if none.” One respondent who tried to write in the word “zero” had difficulty because it would not fit in the box.

Recommendations

- o The question and corresponding responses should be changed to the following:

“Of all the students you teach at your current school, what percent have an Individual Education Plan (IEP) because they have disabilities or are special education students?”

None
1–24%
25–49%
50–99%
100%

Of all the students you teach at your current school, how many are of limited-English proficiency?

Recommendations

- o The question and corresponding responses should be changed to the following:

“Of all the students that you teach at your current school, what percent are of limited-English proficiency?”

(Students of limited-English proficiency are those whose native or dominant language is other than English, and who have sufficient difficulty speaking, reading, writing, or understanding the English language as to deny them then opportunity to learn successfully in an English-speaking-only classroom.)

None
1–24%
25–49%
50–99%
100%

Your Current School—Conditions and Experiences (Questionnaire for Current Teachers)

Feedback From Participants

- Of the 24 total respondents, 5 told researchers that they want a neutral response in between “Somewhat Agree” and “Somewhat Disagree.”
 - Respondent 13 left her answers blank when she felt indifferent about a question.
 - Respondent 11 wanted either a “Not Applicable” option or the scale modified. She thought that using the word “strongly” is too extreme while “somewhat” implies that something is wrong. She asked for something in between those two choices or to simply remove the word “somewhat” from the choices.
- Respondent 21 was one of several private school teachers who commented that the terminology differences between the public and private schools made some of these questions difficult. At his school, a Dean is in charge of discipline, not a headmaster or principal. Therefore, questions about the principal enforcing school disciplinary policy were difficult to interpret.

I worry about the security of my job because of the performance of my students on state and/or local tests.

- Several respondents who taught in private schools mentioned that this does not apply to teachers at private schools.
- Other private school teachers thought about “state and/or local tests” as standardized tests such as the Stanford or Iowa test.

State or district content standards have had a positive influence on my satisfaction with teaching.

- Respondent 4, a private school teacher, interpreted “State or district” as Archdiocese.
- Several respondents who taught in private schools mentioned that this does not apply to teachers at private schools.

I am given the support I need to teach students with special needs.

- Respondent 2 thought the phrase “special needs” was too ambiguous and needed to be further explained.

Recommendations

- Add the term “school head” for the private school teachers.

- o Add a “Not Applicable” or “N/A” option for the items “I worry about the security of my job because of the performance of my students on state and/or local tests” and “State or district content standards have had a positive influence on my satisfaction with teaching.”

Student Problems (Questionnaire for Current Teachers)

To the best of your knowledge how often do the following types of problems occur with students at your current school?

Feedback From Participants

- Generally, all items were understood. The items “use of alcohol,” “use of illegal drugs,” “possession of weapons,” “student racial tensions,” “student verbal abuse of teachers,” “student acts of disrespect for teachers,” and “gang activities,” however, did cause minor problems and are discussed in further detail below.
- Respondents 4 and 17 did not feel qualified to answer some of these questions about the whole school “in general.” One mentioned that not every negative incident is broadcast to the whole school, so he knew only about situations involving his own students. Although these people were concerned about this, they were ultimately able to answer the questions for the whole school rather than just their own classrooms.
- One respondent did not know the answers to some of these questions and chose “never happens” instead of leaving it blank. This could be a problem if people check off “never happens” when they are uncertain about the answer.

Use of alcohol

- Respondent 5 wanted to know if this refers to “use of alcohol at school” or “use of alcohol by students.”

Use of illegal drugs

- Respondent 5 wanted to know what kinds of drugs are referred to in the question. “Does this include prescription drugs?”

Possession of weapons

- Respondent 18 told researchers that the term “weapons” was vague. He gave the example of a student who had cut another student with a nail clipper; something that hardly seemed like a weapon. However, it was considered a weapon incident because the parents of the injured student pressed the issue.

Student racial tensions

- Respondent 17 said, “There is always a racial tension, i.e., comments always perceived differently because of race.” He did not think that this question fit in with the others like “use of illegal drugs,” which to him appear to be more “Bad.” He thought it was odd to say that racial tensions “happened” because they have always existed.

- Respondent 8 defined “racial tensions” as including both interracial and intraracial between students and between students and teachers.
- Respondent 21 considered racial tension to be incidences of racial epithets being used as well as the bullying that apparently takes place between older and younger Korean students.

Student verbal abuse of teachers

- Four respondents mentioned that they would lump together “student verbal abuse of teachers” and “student acts of disrespect for teachers.” They thought the two meant the same thing. Another respondent thought it would be good to classify them under an “insubordination” category.

Student acts of disrespect for teachers

- See above.

Gang activities

- Respondent 21 indicated that his school was very affluent. When he reached this section, he reported that there was some gang activity and noted that each student had been assigned to a cluster of classrooms that had its own name. Students started to identify with each cluster so much that rivalries developed between the clusters, and he remarked that the teachers wondered whether they had accidentally created gangs. The gang activity he was reporting was the rivalries between the clusters of classrooms.
- Respondent 8 defined “gangs” simply as “organized groups.”
- Respondent 2 reported on gang activities at the neighborhood level, rather than in the schools themselves.

Recommendations

- o “Student verbal abuse of teachers” should be dropped, because it is a subset of the larger category “student acts of disrespect for teachers.”
- o The term “racial tensions” should be clarified to avoid misinterpretation.

School Problems (Questionnaire for Current Teachers)

To what extent is each of the following a problem at your current school?

Feedback From Participants

- Aside from “teacher absenteeism” and “poor student health,” all items were generally understood.

Teacher absenteeism

- Respondent 1 asked the researchers if this included attending educational classes and training sessions.

Poor student health

- Three of the 24 respondents were unsure which “health” reasons were included here. “Are they things like nutrition? Or are common colds included?” They found this question “unclear.” Although they were confused, all given interpretations of “health” seemed reasonable.

Recommendations

- o This question should remain as it is.

Attitudes Toward Teaching (Questionnaire for Current Teachers)

To what extent do you agree or disagree with each of the following statements?

Feedback From Participants

- Respondent 20 mentioned that there should be a “neutral” option available for the respondent.

If I could get a higher paying job I’d leave teaching as soon as possible.

- Respondent 5 found this question “insulting.” She said, “It’s not just about money.”

Recommendations

- o The previous questions have the scale “Strongly Agree, Somewhat Agree, Somewhat Disagree, Strongly Disagree” whereas this question has the scale, “Strongly Agree, Agree, Disagree, Strongly Disagree.” The questions appear this way on SASS and should remain as they are to maintain consistency.

Hours Working (Questionnaire for Current Teachers)

How many total hours do you spend on ALL teaching and other school-related activities during a typical FULL WEEK at your current school?

Feedback From Participants

- Respondents 5 and 10 found that the answer box did not allow for a decimal answer. One of them suggested that the question should say “approximately” for clarification. The other suggested that there should be an instruction that says to “round to the nearest whole number.”

Recommendations

- o There should be a note that says, “Round to the nearest whole number.” There should be an apple bullet on the paper survey that notes this below the question.
- o An error message should appear when the respondents report decimal answers, prompting them to round to the nearest whole number.

How many hours are you required to work to receive base pay during a typical FULL WEEK at your current school?

Recommendations

- o There should be a note that says, “Round to the nearest whole number.” There should be another apple bullet on the paper survey that notes this below the question.

How many hours a week do you spend delivering instruction to a class of students?

Feedback From Participants

- Respondent 17 said that this is missing the phrase “FULL WEEK.” The previous two questions say it, but this one does not. This is inconsistent.

Recommendations

- o There should be a note that says, “Round to the nearest whole number.” There should be another apple bullet on the paper survey that notes this below the question.
- o The reference period in this item is different from the previous two. The question should read, “How many hours during a typical FULL WEEK at this school do you spend delivering instruction to a class of students?” to maintain consistency. This question should not be changed for the 2004–05 TFS but should be changed for the next SASS.

Extra Activities (Questionnaire for Current Teachers)

During this school year, do you or will you—

Feedback From Participants

- Respondents generally understood this question, aside from the following comments:

Serve as a department lead or chair?

- Respondent 13 mentioned that “department lead or chair” and “lead curriculum specialist” are often the same thing.

Serve as a lead curriculum specialist?

- Respondent 8 did not know what “lead curriculum specialist” meant.
- See above.

Recommendations

- o This question should remain as it is. If a teacher holds one of these positions, he or she should not be confused by the title.

School Information (Questionnaire for Current Teachers)

Please provide the following information about your current school.

Feedback From Participants

- Several respondents were confused by the difference between “county” and “school district.”

Recommendations

- o This question should remain as it is.

Decision to Leave

Indicate the level of importance EACH of the following played in your decision to leave the TEACHING PROFESSION. (Questionnaire for Former Teachers)

Feedback From Participants

- Respondents generally understood this question. There were a few problems with the items “health,” “to retire,” “to pursue another career,” and “to take courses to improve career opportunities WITHIN the field of education.” These are mentioned in further detail below.
- Some respondents pointed out a usability issue. On certain browsers, the right-hand side of the page on “Decision to Leave” is cut off.

Health

- Every single respondent mentioned both “mental” and “physical” health:
 - o Respondent 22 considered “health” to be a variety of issues, such as “mental health, physical health, diseases, and age-related health issues.”
 - o Respondent 23 told researchers that “health” meant mental health, such as having a high workload, being stressed out, and experiencing sleep deprivation as well as physical health, such as her broken shoulder, which was the result of an injury in the classroom.

To retire

- Respondent 12 told researchers that she does not understand this. She guessed it meant “just for the sake of retiring” but thinks it is “strange” because she thinks people do not retire “just for the sake of retiring.”

To pursue another career

- Respondent 16, a former teacher who moved to an administrative position within the field of education, asked, “Is that a career change?” She thought about this for a while and then decided that administration “is another avenue within education.”

To take courses to improve career opportunities WITHIN the field of education

- Respondent 22 had a hard time understanding what these two education questions were asking. She wondered what kind of courses were being referenced.
- Respondent 24 did not initially recognize the difference between these two questions. “Within” and “Outside” did not stand out to her.

Recommendations

- The question should be reworded to, “Indicate the level of importance EACH of the following played in your decision to leave your K–12 TEACHING POSITION.”
- “To pursue another career” should be reworded and should include an example as, “To pursue a position other than that of a K–12 teacher.”

From the items above, which do you consider the most important reason in your decision to leave the TEACHING PROFESSION? (Questionnaire for Former Teachers)

Feedback From Participants

- Respondents 7, 22, and 23 had difficulty finding their exact reasons for leaving teaching:
 - Respondent 7 said that everyone had a “particular situation” and that perhaps a fill in the blank option would be useful for this question.
 - Before Respondent 22 looked back to find her “most important” reason, she first thought of what she would say and looked for it above. Her reason was that “an opportunity that was better just came along so she decided to take it.” She chose “to pursue another career,” which was the answer closest to her reason, although she was “not necessarily looking to change her career.”
 - Respondent 23 scrolled back to see if her entire reason was covered by any of the sections. She chose “dissatisfied with teaching as a career,” although this was not really her reason. Her reason was the extreme burden and time requirements that the career imposed on her. She mentioned that most people retire for these reasons, and it would be a good idea to include an option such as that one.

Recommendations

- The question should be reworded as, “From the items above, which do you consider the most important reason in your decision to leave your K–12 TEACHING POSITION.”

Indicate the level of importance EACH of the following played in your decision to leave LAST YEAR’S SCHOOL. (Questionnaire for Current Teachers)

Feedback From Participants

- Respondent 5 was unable to find the exact reason for her move from the previous school. Her reason was “the students.” She ended up choosing “working conditions.” She told researchers that they should consider adding a question concerning the students. Or, there should be a space to write in an “other” answer.

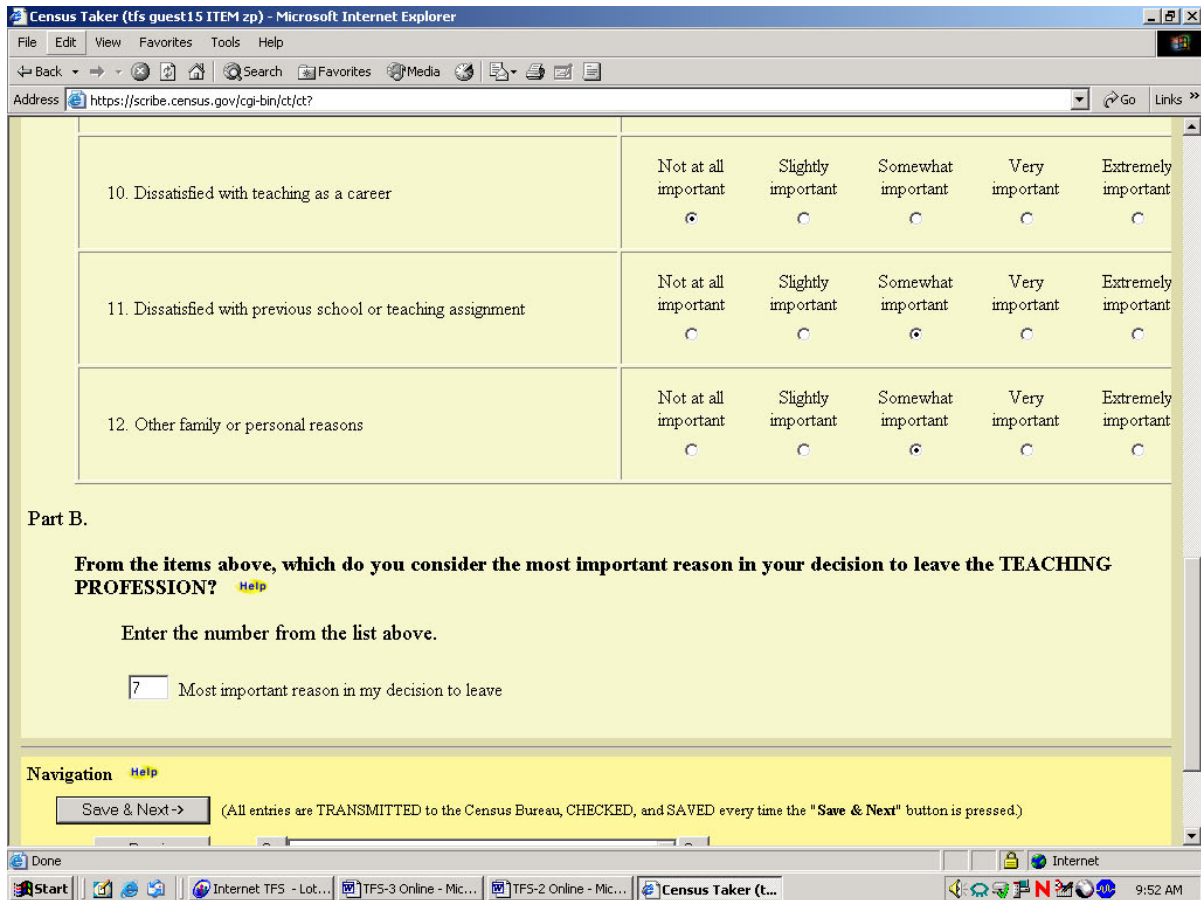
- On certain browsers, the “Extremely important” option was partly cut off by the edge of the screen, and it almost appeared as though there was a higher option to the right but no scroll bar to access it.

Recommendations

- “Students” should be added as an option for reasons for leaving last year’s school.
- The page should be centered so that the options on the right-hand side of the screen are no longer cut off.

Decision to Leave, Usability (Questionnaires for Current and Former Teachers)

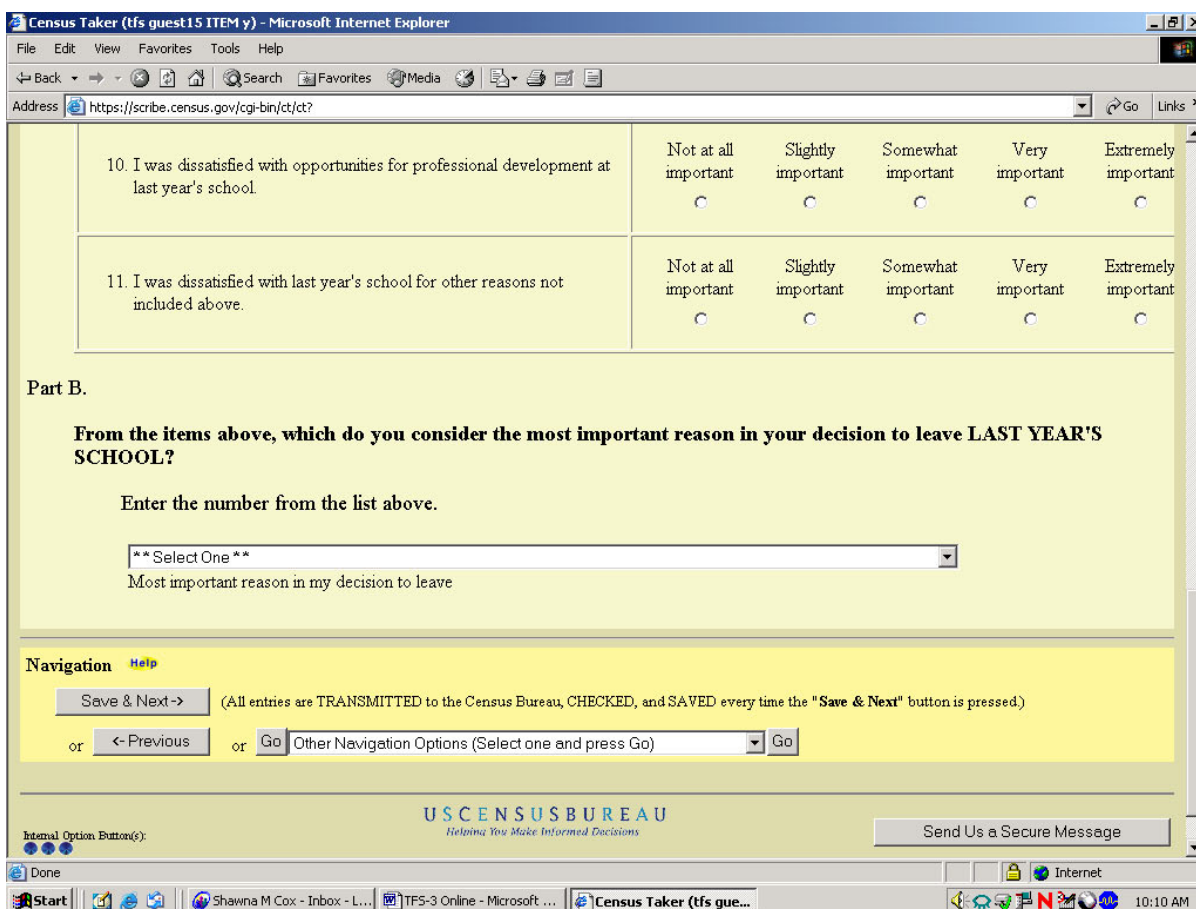
- A dropdown box and an entry box were both tested for this item.
- The Questionnaire for Former Teachers version has an entry box and appears as:



Feedback From Participants

- Seven of the nine respondents who answered this question found it “easy” to enter the number of the most important reason in the box.

- An additional respondent mentioned that it would be nice to have a list of options to choose from (as in the Questionnaire for Current Teachers version, shown below). Then she decided that she liked it the way it was on the survey because she had to scroll up and down and, by doing this, she reminded herself how she answered each of the above categories. She wanted to make sure that whatever she considered to be the most important reason was something that she rated as being extremely important above.
- The remaining respondent would have preferred a list of choices from which to choose, rather than having to enter a number. She had to scroll up and reread everything, and then she accidentally typed in the incorrect numbered choice below and said, “If I had a list to choose from, I wouldn’t have made a mistake.”
- The Questionnaire for Current Teachers version has a dropdown box:



Feedback From Participants

- None of the respondents had difficulty choosing their response from the dropdown box.

Recommendations

- o The “decision to leave” item on both versions of TFS should have the dropdown box format, as it currently is on the Questionnaire for Current Teachers. The Questionnaire for Former Teachers format caused extraneous scrolling and erroneous reporting by the respondents.

Principal's Effectiveness (Questionnaires for Current and Former Teachers)

Indicate how effectively your principal or school head performed each of the following at LAST YEAR'S SCHOOL.

Feedback From Participants

- One respondent noticed the previous order of agreeability was positive to negative. He mentioned that the order here should be going from left to right, “extremely effective” to “not at all effectively,” or positive to negative, to be consistent with previous items.
- Halfway through the question, Respondent 9 noticed the importance of the word “effectively” and started answering the questions with respect to how effective the principal actually was at each of these things, rather than simply how hard he or she may have tried.
- Some of the questions in the “Principal’s effectiveness” section did not apply to one respondent who was a private school leaver, who suggested that a “not applicable” option be available. For example, curriculum standards and student assessments were not an issue in his school.
- One leaver had a hard time remembering her formal principal. She became confused because she still worked closely as a substitute teacher with her old school, which has a new principal. She also told the researchers that a lot of these questions were “bad” because they forced her to mark the principal down for issues that were not necessarily in the principal’s control. This is an example of “social desirability.” She did not want to respond negatively, even though the principal may have, in reality, been ineffective.

Encouraged the teaching staff to use student assessment results in planning curriculum and instruction

- Respondent 17 asked the researchers if “student assessment results” refer to standardized tests, in which case, this question did not apply to private school teachers.

Facilitated and encouraged professional development activities of teachers

- Most respondents considered workshops to be the best example of “professional development activities.”

Recommendations

- o In the next administration of SASS, the order of agreeability should be kept consistent throughout the survey.
- o The reference period should be clarified. The question should read, “Indicate how effectively your principal or school head performed each of the following at LAST SCHOOL YEAR’S SCHOOL.”
- o Some of the items mentioned in this question were not necessarily the principal’s duty. For this reason, a “not applicable” option should be available to respondents.

Satisfaction with Current Position (Questionnaires for Current and Former Teachers)

How would you rate your CURRENT teaching position relative to LAST YEAR’S teaching position in terms of each of the following aspects?

Feedback From Participants

- Generally, all items were understood, with the exception of a few which caused some problems. These problems are mentioned below.

Salary

- Five of the current teachers told researchers that salaries do increase, but only by the slight amount that is the cost of living adjustment or simply moving up the pay scale from year to year. This increase is not due to teachers getting raises. These respondents found this question irrelevant, and marked “no better no worse.” One respondent mentioned this fact, but still responded with “better in current position” because of the slight adjustment.

Benefits (e.g., health insurance, retirement plan)

- One respondent was confused about what sorts of things were included in “Benefits.” The examples “threw her off” because they included only “health insurance and retirement plan.” She asked researchers if things like “time off and sick leave” were included in this benefits category.
- One respondent was able to describe the differences in benefits at the same school between the 2 years.

Opportunities for professional ADVANCEMENT or PROMOTION

- Stayers interpreted “opportunities for professional advancement or promotion” only in the context of education, whereas leavers interpreted it in a much more general sense:
 - To one stayer, “Professional Advancement or Promotion” meant gaining increased rank, such as moving from a teacher to an assistant principal, and gaining additional responsibilities, which would essentially be leaving teaching.
 - To one leaver, “opportunities for professional advancement or promotion” was interpreted as “moving to a position of autonomy and higher money, receiving more flexible hours, and becoming a mentor to others.”
- All leavers said that their “opportunities for professional advancement or promotion” were better in their new careers. This might be a question that mostly applies to leavers since teachers have little room for promotion.

Opportunities for professional DEVELOPMENT

- Most respondents mentioned that “professional development” meant attending various types of workshops.

Social relationships with colleagues

- Stayers and leavers interpreted this question the same way:
 - One stayer said, “sharing materials, socializing outside school, and getting along together” were characteristics of a “social relationship with a colleague.”
 - Another stayer said a “social relationship with a colleague” meant “how she socially interacts and how social and friendly they are both in and out of the workplace.”
 - One leaver said that “social relationships” had many different meanings; she mentioned that this type of relationship could be strictly in school or both in and out of school. She gave some examples such as getting lunch together, getting a drink together after school, getting together on weekends, and getting their families together.
 - Respondent 16, a former teacher who now works in education as an administrator, defined “social relationships” as “How I interact with other teachers...going out to lunch with people...how friendly people are.”

Safety of environment

- Respondents had varied interpretations of what “safety of environment” meant. They appeared to think of it in terms of the students and others who surrounded them on a daily basis rather than as maintenance and building issues:
 - A stayer interpreted an aspect of “safety of environment” as “an environment in which autistic children and children with attention deficit disorder were in the classroom with the other students.”
 - Another stayer interpreted “safety of environment” as “whether or not the school itself is a safe and orderly environment, not the building condition and cleanliness.”
 - One leaver interpreted “safety of environment” as ranging from a secured building that not just anyone can simply enter to the presence of surprises and whether every day was the same.
 - Another leaver thought that “safety of environment” factored in the number of people around on a day-to-day basis, and the fact that students were often highly emotional and came with a lot of “baggage” whereas people in the office were more mature and could handle situations better.
 - Another leaver thought that “safety of environment” involved “the behavior of students.”

Professional prestige

- Stayers interpreted “professional prestige” in the context of their school’s prestige, whereas leavers interpreted it as position related:
 - One stayer said, “It has to do with scores on Standards of Learning or school recognition.”
 - Another stayer said “professional prestige” meant that “when I tell people where I teach, they say, ‘WOW! That’s a really good school.’”
 - A third stayer said that “professional prestige” meant the “personal prestige of being able to work in various schools with various economic backgrounds.”
 - One leaver described “professional prestige” as whether people admired and respected you when you told them what your career was.
 - One leaver mentioned that “professional prestige” involved saying “I am a substitute teacher” versus “I am a teacher” because people assume that others want a full-time job, and saying that you are a substitute teacher makes them think that you cannot get a full-time job.
 - A third leaver thought that “professional prestige” had to do with the fact that in her current position people “look up to her because her job is to help meet a lot of their needs.”

Procedures for performance evaluation

- Two leavers were confused and did not answer this question. This was because they were working at jobs where their “performance evaluations” were not clearly defined, and they were unaware of the evaluation process or if they were being evaluated at all.

Ability to balance family and work

- Respondent 11 was unsure how to answer “ability to balance family and work” because she was a nun. She felt this would not apply so much to single people. The word “family” is an exclusive word.

General work conditions

- “General work conditions” is a very broad term and was interpreted in a number of different ways by the respondents:
 - Respondent 2 interpreted “general work conditions” as “safety and the school’s physical condition.”
 - Respondent 13 said “general work conditions” meant “safety of environment.”
 - Respondent 23 mentioned that her current position in substitute teaching had better “general work conditions” because she could pick and choose where she wanted to work, which was more satisfying.
 - Respondent 16 mentioned that her current “general work conditions” were better because her office had A/C and classrooms do not and also because she can call in sick without having to find a substitute now.
- Two of the respondents above included the word “safety” in their definitions of “general work conditions.” This, along with an additional respondent, who mentioned that “general work conditions” and “safety of environment” were very similar to one another, suggested that there is some overlap in these two terms.

Intellectual challenge

- Three respondents were unsure of what “intellectual challenge” meant.
- Stayers and leavers generally interpreted this question the same way:
 - A stayer interpreted “intellectual challenge” as “figuring out how each individual student learns best. Since every student is different, I have to find new ways to get them to learn how to read.”
 - A leaver talked about the “challenge of finding different ways to get students excited.” (She also discussed “having to think more about how to spend her time, or time management,” but this involved her new career, unrelated to teaching.)
- However, other respondents had very different ways of defining “intellectual challenge.”
 - A stayer interpreted “intellectual challenge” as “working on a consortium and defining ‘best practices’ for the National Board Certification.”

Sense of personal accomplishment

- Stayers and leavers generally interpreted this question the same way:
 - One respondent defined personal accomplishment as “how I feel at the end of the year. Was I effective?”
 - Another respondent defined “personal accomplishment” as his “opportunity to make a difference in the lives of others.” He mentioned that this was now going to be enhanced in his new position as regional Technology Learning Coordinator because he would influence a larger number of children.

Recommendations

- In the phrase “ability to balance family and work,” the word “family” should be changed to “personal life” to make this question more applicable to those who are single.
- If the question about “professional prestige” is really asking about the “professional prestige of teaching,” it should explicitly say this to avoid the different interpretations by stayers and leavers. Also, asking about a stayer’s “professional prestige” may not yield the correct information. If a teacher has remained in the same job at the same school for the past 2 years, his or her “professional prestige” should not have changed.

Job Satisfaction (Questionnaire for Former Teachers)

Thinking about all the factors that influence your job satisfaction, overall, how satisfied are you with your current position relative to teaching?

Feedback From Participants

- Respondent 22 understood this question up to the point of “relative to teaching”; these three words confused her. She had no idea what the question was actually asking and then thought about it for 5 minutes. She said we should either get rid of these three words or change them to “compared to teaching.”

Recommendations

- The question should be worded, “Thinking about all the factors that influence your job satisfaction, overall, how satisfied are you with your current position compared to that of a K–12 teacher?”

College Courses—Enrollment, Type, Reason for Taking (Questionnaires for Current and Former Teachers)

Have you enrolled in college or university courses since the end of last school year?

Feedback From Participants

- There were many more leavers who were enrolled in college or university courses than there were stayers.
- The respondents’ interpretations of “enrolled” were generally uniform. All respondents included the fact that they had to “pay” to be enrolled.

- One respondent “paid money to take some course that would lead to some sort of certification,” which meant he was enrolled.
- Another respondent defined “enrolled” as getting into a university and paying and signing up for classes.

Recommendations

- This question should remain as it is.

Which of the following best describes your enrollment in these courses?

Feedback From Participants

- Respondent 13 was enrolled in college courses to obtain her doctorate. She told the researchers that the responses of “vocational certificate program, associate degree granting program and bachelor’s degree granting program” were “insulting” to her. She thought these should be eliminated because, assuming the user was already a teacher, he or she should already have something like a BA or Associate’s degree. Aside from this comment, she had no difficulty answering the question.
- Four respondents had difficulty choosing the correct response to this question:
 - There was no category that exactly matched Respondent 3’s situation. He was taking classes towards certification in an e-commerce program, a skill set that included Oracle, Java, and SQL. He incorrectly chose the “Certificate of Advanced Graduate Studies program” response, but he said it was only a “guess.” He probably should have chosen the “vocational certificate program.”
 - Respondent 16 was confused by the phrase “education specialist.” She was trying to obtain a certificate in “Administration” and thought that this might apply to her because she already had a master’s degree and this option was also 1 year beyond the master’s. She suggested that “Education Specialist” be capitalized to indicate that it was, “in fact,” a specific degree. She also thought that there should be examples for “Professional Degree.”
 - Respondent 19 had difficulty selecting which type of enrollment she had. She wanted to become a counselor in Virginia, which required obtaining a national certificate. This typically takes 1 year beyond a Master’s. She had a hard time choosing between “Master’s degree,” “Educational specialist or professional diploma,” and “Certificate of Advanced Graduate studies program.” She mentioned that these options were not clear and suggested that there be an “Other” box, where the user had the opportunity to type in what his or her enrollment was.
 - Respondent 22 was enrolled in courses to obtain an “advanced professional” certificate. This was not one of her options, so she first chose “Certificate of Advanced Graduate Studies,” thinking it was the closest option. Then she thought about her choice and did not know if “Certificate of Advanced Graduate Studies” included teaching, so she settled on “individual courses” and changed her answer.

Recommendations

- The difference between “Education specialist or professional diploma” and “certificate of advanced studies program” should be clarified. This item will not be changed on the 2004–05 TFS but should be changed on the next SASS.

Which of the following best describes the reason you enrolled in these courses?

Feedback From Participants

- Before respondents saw this question, researchers asked each to describe, in their own words, why they enrolled in the course.
- Four respondents had difficulty finding their reasons for enrollment in these courses. In some cases, several of the responses were correct for an individual respondent, and in others, the given responses seemed insufficient:
 - Respondent 3 chose that he was obtaining a certificate “for use in a position outside the field of education” but told researchers that this response was not entirely true. His next job would involve both consulting and training, both of which involve some sort of education. He felt as though the question did not provide him sufficient choices from which to choose.
 - Respondent 18 enrolled in courses that would lead to a Ph.D., something he wanted because he was the first in his family to go to college and felt that by getting a Ph.D. he would “raise the bar” for his son. He also had a long-term goal of being a superintendent. When he saw the available options, he settled on the “For reasons unrelated to obtaining or using in a job” because he felt that his main reason was personal in nature. He suggested that there be the option to choose more than one response here.
 - Respondent 7 wanted to “learn another language and increase her general marketability.” She said, “all of the choices describe me equally, and no single choice presents the entirely best reason for my enrollment.” Her courses were language courses, which “are useful almost everywhere these days.” She suggested that a scale of importance might be more useful here.

Recommendations

- There are situations where the respondent selected “For reasons unrelated to obtaining or for using in a job (e.g., personal fulfillment)” for the “personal fulfillment” aspect, when the respondent did, in fact, use the courses in his or her job. To avoid these situations from occurring, another question should be added and should follow this one, just to make sure that the course is, in fact, completely non-work related. The question should read as follows:

“Are these courses useful in your current position?”

- Yes
- No

Return to Teaching (Questionnaire for Former Teachers)

Would you consider returning to K–12 teaching?

Feedback From Participants

- Respondent 12 mentioned that she would like to return to K–12 teaching, but indicated that she cannot in the state of Maryland because she is drawing from a pension. The question was not applicable to her. She marked “No,” when she should have marked “Yes” and gone to the question “Indicate how important each factor would be in influencing your decision to return to teaching.” This question specifically asks about “ability to maintain your teacher retirement benefits,” which is where her issue comes up in the survey.

- Respondent 16 reread this question several times because it was confusing for her situation. When she discussed this item with researchers, she said, “I have not left teaching. I left the classroom. Being an administrator in a school is still teaching.”

Recommendations

- o This question should be worded, “Would you consider returning to the position of a K–12 teacher?”

At what level would you most like to teach?

Feedback From Participants

- Three respondents had difficulty in deciding at which level they would like to teach. All of them were indifferent between “junior high” and “senior high.” One of these respondents suggested that the response options to this question could be broken up into just two choices: elementary and secondary.

Recommendations

- o This question should remain as it is.

Indicate how important each factor would be in influencing your decision to return to teaching.

Recommendations

- o This question should be reworded, “Indicate how important each factor would be in influencing your decision to return to the position of a K–12 teacher.”

Would any factors other than the ones listed above influence your decision to return to teaching?

Feedback From Participants

- Respondent 9 felt obliged to answer this section. She thought about this for several minutes, and it appeared that she was searching for additional reasons that were not necessarily of significant importance to her.

Recommendations

- o This question should be reworded, “Would any factors other than the ones listed above influence your decision to return to the position of a K–12 teacher?”
- o There should be a skip pattern on this question. The question should appear as it is now, without the spaces for “list up to two factors.” If the respondent answers “yes” to this question, he or she should be directed to a new question that says, “List up to two factors that influenced your decision to return to the position of a K–12 teacher.”

What is the LOWEST teaching salary you would accept to return to teaching?

Feedback From Participants

- “Salary” was unclear to two respondents.
 - Respondent 7 asked, “Are you gonna give me anything else? What about benefits?” She paused for a moment, and while she was pausing she thought about how much she would accept solely in terms of money, no benefits included.
 - Respondent 9 did not know whether to enter a take-home amount, or a salary as documented in her contract. Distinguishing this seemed very important to her, as she mentioned it several other times during the interview.

Recommendations

- This question should be reworded, “What is the LOWEST teaching salary you would accept to return to the position of a K–12 teacher?”
- Add a note to indicate they should provide the lowest salary they would accept to return to the position of a K–12 teacher, not including benefits.

How soon might you return to teaching?

Feedback From Participants

- All of the respondents who answered this question preferred to have the years broken down into school years rather than calendar years.
- One respondent mentioned that the gap between 2005 and 2010 seemed large and that we may want to consider breaking it down further.

Recommendations

- This question should be reworded, “How soon might you return to the position of a K–12 teacher?”
- There should be commas added to the numbers in the error messages.

Remain in This Job (Questionnaire for Former Teachers)

How long do you plan to remain in this job?

Feedback From Participants

- Respondent 16 asked researchers, “Do they mean job or field?” She then answered for field because she thought the question was asking in the “long term,” and she indicated that she would remain in this field “until I am eligible for retirement” option.
- Respondent 22 was indifferent between several different choices and wanted to be able to choose more than one here.

- One respondent mentioned that the “until I am eligible for Social Security benefits” choice is a bit tricky. This is because if someone is past the age of 62, he or she is eligible for Social Security benefits. However, benefits are provided at a reduced rate from age 62 to 65, which means that there are two types of Social Security benefits for which one is eligible: reduced and full. Respondent 23 wanted this to be specified, because she was already eligible but would not collect Social Security until age 65 and planned on teaching until then.

Recommendations

- o This question should be reworded, “How long do you plan to remain in your current position?”

Remain in Teacher (Questionnaire for Current Teachers)

How long do you plan to remain in K–12 teaching?

Feedback From Participants

- Respondent 13 suggested that the question should ask, “How long do you plan to remain in K–12 education” rather than “teaching.” She was trying to move up to the rank of assistant principal, so she did not know how to answer the question properly.
- Respondent 21 asked the researchers whether “K–12 teaching” would include being an administrator at a “K–12 school.”

Recommendations

- o This question should be reworded as “How long do you plan to remain a K–12 teacher?” to avoid this confusion of field versus position.

Attempt to Leave (Questionnaire for Current Teachers)

In the last 12 months, have you applied for a job in attempt to leave K–12 teaching?

Recommendations

- o This question should be reworded, “In the last 12 months, have you applied for a job in attempt to leave the position of a K–12 teacher?”

Retired from Teaching (Questionnaire for Former Teachers)

Do you consider yourself to be retired from K–12 teaching?

Feedback From Participants

- The nine respondents defined “retired” in very different ways. To some, the term seemed unclear and confusing.
 - o Respondent 3 was “retired” from teaching because he “did not plan on ever returning” in the future.
 - o Respondent 7 thought “retired” was misleading because it made her think of “old” teachers who had been teaching for a long time.

- Respondent 9 contradicted herself several times when talking about being “retired.” She thought people were “retired” when they were “old and ending their career.” But, she considered herself being “retired” at age 26. She later told us that she is considering returning to teaching as soon as the next school year, which would suggest that she was not retired. She seemed confused about what the word meant.
- Respondent 12 did not initially consider herself “retired” in early questions due to her substitute teaching, but here said she was “retired” because she was drawing income from a retirement plan and could spend her time doing whatever she wanted to do.
- Respondent 16 thought that the question was asking, “Do I see myself as retired from education?” She answered “no,” although it was unlikely she would return to teaching.
- Respondent 19 defined “retired” as “never going back to teaching again” and mentioned that people do not necessarily have to be old to retire and that she did not consider herself retired from teaching because she planned on returning after grad school.
- Respondent 22 defined “retire” as “going through the formal process of filling out retirement papers.”
- Respondent 23 had a full-time teaching career of 40 years and was currently a substitute teacher. In her jurisdiction, substitutes are considered to be “active members,” and active members are not considered “retired.”
- Respondent 24 defined “retired” as “will never do it again.”

Recommendations

- There was a lot of discrepancy within the definition of “retired.” Each would yield different results. The definition should be clarified.

At what age did you retire from K–12 teaching?

Recommendations

- The question should be worded, “At what age did you retire from the position of a K–12 teacher?”

Pensions, Retirement Systems, and Employer-Sponsored Plans

This section consisted of a series of four questions about pensions, retirement systems, and employer-sponsored plans. A surprisingly low number of respondents understood what plans and retirement options were available to them. Even in cases where the respondent had been participating in or collecting from such plans, they did not have a full understanding of the type of plan in which they were enrolled.

Are you currently collecting a pension from a teacher retirement system? (Questionnaires for Current and Former Teachers)

Feedback From Participants

- Respondents 6 and 13 told researchers the order of these questions should be reconsidered. One said that the salary questions should come before the retirement/pension questions. The other told researchers that the order of the pension questions should be reversed. She said that the user should be asked first, “Are you currently participating in a teacher retirement system pension plan?” and then “Are you currently collecting a pension from a teacher retirement system?”

Recommendations

- o Either put the word “collecting” in bold font or all capital letters to make sure that the respondent does not confuse this question with the next one, which asks if the respondent is “participating” in the same plan.

Based on your years of teaching to date, are you eligible to collect a pension from a teacher retirement system in the future? (Questionnaire for Former Teachers)

Feedback From Participants

- Seven of the nine leavers associated a certain number of years with eligibility “to collect a pension from a teacher retirement system.” Many of the leavers already responded to this question when asked previously, “Are you currently participating in a teacher retirement system pension plan?”
- Two respondents seemed confused about what the question was asking. For instance, one respondent thought “eligible for retirement” simply meant, “if you were employed by a school system and filled out all the paperwork to collect one.”

Are you currently participating in a teacher retirement system pension plan? (Questionnaire for Current Teachers)

Feedback From Participants

- Some respondents showed an understanding of “pension” and “teacher retirement system.” These respondents gave examples to the researchers about their specific plans. Researchers found that the respondents had slightly less difficulty answering these questions when they knew some information about their own plans:
 - o One private school stayer mentioned that she did not participate in this type program; she thought that there were options available through the Archdiocese, part of a benefit package that included life insurance. The respondent estimated that retirees from her school received roughly 1/3 to 1/2 of their salary as a retirement package.
 - o One private school leaver understood the term pension. She told the researchers that her Archdiocese offered a pension in which teachers were eligible after 1 year, and the archdiocese contributed 4 percent of her salary to this pension fund.
 - o One respondent asked, “like an IRA?” She seemed to understand the difference between a pension and a 401(k)/403(b) employer-sponsored plan. She told the researchers that they have a TIAA-CREF plan and explained a bit about pensions, but she indicated that she was not that familiar with all of the benefits.
 - o Of the total 24 respondents, 4 thought that a “teacher retirement system pension plan” was the same thing as an “employer-sponsored 401(k) or 403(b) plan.” Some respondents mentioned that their pension plan was a 403(b), and some mentioned specific plans, such as a “thrift savings plan” or TIAA-CREF.
- Many respondents showed very minimal understanding of “pension” and “teacher retirement system” and gave very broad definitions of what they thought these terms meant. Others admitted that they did not know much about these things. Respondents had more difficulty answering these questions when they did not know any information about their own “teacher retirement system pension plan”:

- Respondent 14 admitted to the researchers that she did not know much about “retirement system pension plan.” She was not contributing to one when she was working part time. She mentioned that they took out a small amount from each check for this.
- Respondent 20 told the researchers that he would have liked more of an explanation about “teacher retirement system pension plan” on these questions.
- Respondent 19 defined “pension” to be when a person was paid after a certain number of years working, even when that person had stopped working all together.
- When responding to this question, five of the nine leavers mentioned both whether they were collecting a pension and whether they were eligible to collect one, which was actually asked in the next Questionnaire for Former Teachers question.
 - Respondent 3 told researchers that he was not yet collecting a pension and that he was eligible to collect one due to the fact that he was vested for more than the minimum number of years required in order to collect a pension.
 - Respondent 7 was neither collecting a pension nor eligible to collect a pension. She said this was because she was formerly teaching part time, and a person had to be fully employed for at least 3 years before becoming eligible.
 - Respondent 9 thought that a pension was “collecting money for years of service.” She did not offer specific details about pensions and went on to mention that people were not eligible for retirement until they had been working full time for 5 years.

Recommendations

- Either put the word “participating” in bold font or in all capital letters to make sure that the respondent does not confuse this question with the previous one, which asks if the respondent is “collecting” from the same plan.

Are you currently drawing money from an employer-sponsored 401(k) or 403(b) plan which includes funds you contributed as a teacher? (Questionnaires for Current and Former Teachers)

Feedback From Participants

- One respondent told researchers that the order of the employer-sponsored plan questions should be reversed. She said that the user should be asked *first* “Are you currently contributing to an employer-sponsored 401(k) or 403(b) plan?” and *then* “Are you currently drawing money from an employer-sponsored 401(k) or 403(b) plan which includes funds you contributed as a teacher?”
- Two respondents told the researchers that a 401(k) plan was irrelevant to them because this option was very rarely available to teachers. One respondent mentioned that a 403(b) plan was common but that the term “Tax Sheltered Annuities,” or TSA, was an option with which most teachers would be familiar. Two others mentioned that TIAA-CREF was a common plan.
- Respondents 17 and 19 thought that these two 401(k) questions were essentially asking the same thing. Respondent 19 answered yes that she was drawing from a 401(k) plan, even though this was not the case; she had only been contributing to one.

Recommendations

- o Put the word “drawing” either in bold font or in all capital letters to make sure that the respondent does not confuse this question with the next one, which asks if the respondent is “contributing” to the same plan.

Are you currently contributing to an employer-sponsored 401(k) or 403(b) plan? (Questionnaires for Current and Former Teachers)

Feedback From Participants

- Respondents who had little difficulty answering these questions and showed some understanding of “employer-sponsored plan” usually knew some information about their specific plans and gave some examples to researchers:
 - o Respondent 16 had a 403(b) plan with T. Rowe Price. She clearly understood the difference between a 403(b) and a pension. She was also eligible for a “small” pension from her former school.
 - o One respondent was contributing to a plan. She explained to us that, if she contributed to this type of plan, the employer would give her up to 5 percent based on tenure. She said this was like getting “free money.” She seemed to understand the concept fairly well.
- Other respondents, who showed little to no understanding of what an “employer-sponsored plan” was, gave very broad definitions of what they thought it meant. Some admitted to researchers that they were very confused by this concept:
 - o One respondent thought that “401(k) and 403(b)” should be changed to “retirement.” She did not understand the difference between a “retirement plan” and “employer-sponsored plan.”
 - o Another respondent interpreted “employer-sponsored plan” as when “an employer is putting in money towards retirement by either matching money or just putting it into a retirement fund.”
 - o Respondent 22 did not know whether she contributed to an employee-sponsored plan. She said “no,” then switched her response to “yes.” She seemed confused.
 - o Respondent 24 said that a 401(k) was when “a company offers to contribute money to you.” She had one at her last job and rolled it over into a bank recently.
 - o When asked about a 401(k) or 403(b) employer-sponsored plan, Respondent 9 told researchers that she was not sure if the plan she was involved in was employer-sponsored. She also mentioned that there was no employer matching was taking place. There had been some money coming out of her paycheck, but she did not think that it was a 401(k) type of plan; she was considered a public servant, and she thought that 401(k) plans were only for those working in private enterprises.
 - o Respondent 21 answered “no” here but had to call someone to find out whether the TIAA-CREF was a 401(k) or 403(b). His business office described the plan as a “mutual fund” when in all likelihood it was a 403(b).

Recommendations

- o Put the word “contributing” either in bold font or in all capital letters to make sure that the respondent does not confuse this question with the next one, which asks if the respondent is “drawing” from the same plan.
- o Consider putting the TIAA-CREF here as an example because this is a 403(b) to which teachers commonly contribute.

General Recommendations

- o A surprisingly low number of respondents understood what these terms meant, even in cases where they had been participating in or collecting from such plans; they did not have a full understanding of these items. These four questions should be turned into three general questions concerning “teacher retirement systems”:

“Are you currently collecting a pension from a teacher retirement system or drawing money from a school or system sponsored 401(k) or 403(b) plan which includes funds you contributed as a teacher?”

And

“Are you currently contributing to a teacher retirement system or a school or system sponsored 401(k) or 403(b) plan which includes funds you contributed as a teacher?”

And

“Is your school or system currently contributing to a teacher retirement system or a school or system sponsored 401(k) or 403(b) plan on your behalf?”

Earnings (Questionnaire for Former Teachers)

What are your estimated annual before-tax earnings at this job?

Feedback From Participants

- Respondent 12 typed in “1200.00,” which led to an error because the decimal place should not have been included; she never noticed the “.00” text after the text box. Then, she finished the page and clicked Save & Next. This caused the page to reload with a warning at the top but she did not notice it. She also never noticed the “Ignore Problems” check box at the bottom of the page.

Recommendations

- o There should be an instruction to “Report in whole dollars only.” This will avoid the error of respondents entering decimals.

Do you have any other earned income?

Feedback From Participants

- One respondent was unsure if “other earned income” included other things that related to teaching but were paid for separately, such as training, etc. She included this here and estimated \$2,000, although she noted that the amount was very different from one year to the next.

Recommendations

- o This question should remain as it is.

Earnings (Questionnaire for Current Teachers)

The following questions refer to your before-tax earnings from teaching and other employment. DURING THE SUMMER OF 2004, did you have any earnings from:

**Teaching summer school in your current or any other school?
Working in any NONSCHOOL job?**

Feedback From Participants

- One respondent marked “yes” that she had received such earnings but then did not fill in the box. She may not have noticed it.

Recommendations

- o Currently, a respondent is able to key in data without clicking the “yes” radio button first. This should not be allowed. The user should only be permitted to enter data into this box if he or she clicks “yes” first.
- o Line the “yes” box up with the open fill box, and move them closer to one another.

DURING THE CURRENT SCHOOL YEAR, what is your academic year base teaching salary?

Feedback From Participants

- Two respondents typed in a salary with the decimal points, even though .00 is included beside the box. Neither noticed this. An error message was displayed, and both respondents fixed the problem.

Recommendations

- o There should be a note that says, “Report in whole dollars only” to avoid the error of respondents entering decimals here.

Family (Questionnaires for Current and Former Teachers)

Which category represents the total combined income of ALL FAMILY MEMBERS in your household during 2004?

Feedback From Participants

- None of the respondents with children included their incomes “because they made so little money that it would not affect the household income.”

Recommendations

- o This question should remain as it is.

How many family members were living in your household during 2004?

- Respondent 4 suggested that this series of questions be combined into one question that asks “How many family members were living in your household during 2004?” then, “of these, how many were under the age of 5?”
- Four of the respondents who lived alone and considered themselves “single” did not include themselves in the number of family members living in their households and entered “0.” One of these respondents specifically asked the researchers if she should include herself.
- All but one of the respondents who had roommates did not count them as members of their households. The one respondent who did was a nun, who included the five other sisters in her house.
- Respondents 12 and 18 had additional relatives living in their homes and did not consider them members of their households. They included only “immediate family members, such as spouses and children.”
- All respondents with college-aged children who did not live at home still considered them to be members of their households. One reason was because, as Respondent 22 told the researchers, “even though my two children do not physically live with me, I support them financially 100 percent.”

Recommendations

- o This question should be worded, “Including yourself, how many family members were living in your household during 2004?”
- o An error message for entries of “0” should be added.

On December 31, 2003, what was your marital status?

Feedback From Participants

- When the majority of “not married” respondents saw this question, they all immediately responded “single” before reading the response choices. It seems as though this is the classification they were expecting in the response choices.
- One respondent defined himself as “divorced,” but mentioned that he wanted to define himself as something different such as “single” because he did not like the title “divorced.”

Recommendations

- o “December” should be in all capital letters to make the difference between this question and the next question more obvious to respondents.

What is your current marital status?

Feedback From Participants

- Two respondents did not notice the difference between these two marriage questions. They said, “Those are the same question.”

Recommendations

- o “Current” should be in all capital letters to make the difference between this question and the previous question more obvious to respondents.

Living with a Partner (Questionnaires for Current and Former Teachers)

Are you currently living with a partner?

Feedback From Participants

- Ten respondents who took this survey were either not married or divorced. Half of them talked specifically about sexual orientation, while the other half defined this term in a very broad sense. Two examples include:
 - o One respondent defined “partner” as a person who is a “sort of romantic partner” with whom she “shares all the bills.”
 - o Another respondent told researchers “partner” meant “someone whom she is romantically involved with, or a gay or lesbian partner.” She mentioned that this is a good word because it hits on every kind of relationship.
- All respondents agreed that a roommate would not be considered a partner because a roommate is not someone whom you are “romantically involved with.”
- Respondent 2 said that “partner” is defined too broadly, but she saw it as meaning in a “homosexual sense.” She mentioned that this might be a very sensitive question for others to answer. Researchers wondered if this was the only way she was interpreting “partner,” so they asked her whether she would consider herself living with a partner if her fiancé lived with her, and she said “yes.”

Recommendations

- o This question should remain as it is.

Internet (Questionnaires for Current and Former Teachers)

Why did you choose to complete the interview on the paper questionnaire rather than on the Internet?

Feedback From Participants

- Of the 24 total respondents, 23 would choose to use the Internet because it was more convenient, quicker, and easier than the alternative.

- The one respondent who did not prefer the internet option mentioned that she was “technologically handicapped” and would not have even taken the survey at all if she knew it was on the Internet. She also had very bad eyesight and had immense difficulty reading the survey questions and answers on the screen, which contributed to her aversion to the internet survey.
- Several of these respondents mentioned that “older people might prefer to use the paper version because of lack of technological ability.”

Did you use a computer at home, work, or elsewhere to complete this questionnaire?

Feedback From Participants

- There were very mixed responses about whether the respondent would complete this questionnaire at home or work.
- Five stayers would complete it at home because, “the e-mail at work is to be used only for school-related business, and even though this questionnaire has to do with education, it would not be considered school related or work related.”
- Of nine leavers, six would complete this survey at work, one would be indifferent between completing this survey at home or work, and two would complete it at home. One respondent would have taken it at work rather than at home, because “most offices these days provide computers and Internet.” Another respondent would complete the survey at work and said, “I spend most of my time there, anyways.”

Did you encounter any problems using the Internet questionnaire?

Feedback From Participants

- The majority of respondents thought “problems” meant technical problems, such as “freezing or not properly going on to the next page,” rather than interpretation questions. One respondent told researchers that this should be broken down into two questions: one about navigating the questionnaire and one about interpreting the questions.

Contact Information (Questionnaires for Current and Former Teachers)

The survey you have completed may involve a brief follow-up at a later time in order to gain additional information on teachers’ movements in the labor force. The following information would assist us in contacting you if you have moved or changed jobs.

Feedback From Participants

- Nine respondents had difficulty understanding and reading (###-###-####). One respondent suggested that an actual number (e.g., 222-222-2222) be used here as an example because the number signs are difficult to read because they blur together. Another respondent mentioned that the example should be below the phone number box to make it more visible to users.
- Respondent 11 was not sure if the home or school address was wanted.

- Respondent 7 thought that it was unclear whether she had to simply check the “my name” box or check the box and retype the name. She retyped it the first time she went through a contact information page, but she did not do it anymore on the next two series of information.
- Respondent 12, a user with bad eyesight, could not read the contact information, especially in the areas in which she was typing.
- Respondent 22 would never give out her mobile phone number because “if someone calls her, she has to pay for it.”

Recommendations

- o NOTE: Respondents had some problems with the telephone number format, but this edit was removed from the survey.
- o The “Specify name” box should be moved up next to the “Other” check box. If this cannot be done, then “Specify name” should be replaced by, “If other, specify name.”

What are the names and addresses of two other people who would know where to get in touch with you during the coming years?

Feedback From Participants

- Respondents 1 and 2 were irritated that they had to fill in the contact information about two additional people because the information was not handy, and it was inconvenient to have to leave the room to look up this information. Respondent 1 suggested that there should be a note at the beginning of the questionnaire stating that the respondent would need to refer to addresses.
- Nine of 24 respondents skipped sections of this second contact information portion. Some skipped them because they had trouble remembering addresses of other contacts. Others mentioned they were sensitive or felt uncomfortable giving out nonfamily members’ contact information. Several of these respondents specifically asked the researchers if it was ok to skip these items.

Form Status Menu

Feedback From Participants

- Six of the 24 respondents said, “I am not sure why I am on this page.”
- Nine of the 24 respondents mentioned to the researchers that it was “confusing” to scroll down to see the form check results and then scroll back up to check whether or not they were finished.
- When respondent 9 reached the “Form Status” page, her initial reaction was that “it is intimidating at first. It takes too long to read, but once you read it, it becomes clear.”
- Three respondents admitted to never having read the page because it was “much too wordy.” They both checked “finished” immediately, because they had “answered the last question,” which meant that they were done.
- Respondent 4 said, “This page should only appear if there are errors in my form.”

- Respondent 18 recommended that if the form had no problems the radio button “Finished” should be pre-selected for the user.
- Respondent 10 suggested that each page should not allow the user to proceed unless that page was completed successfully, in order to avoid this “confusing” page.
- “Review check results?” three respondents asked. “Do I have to go back and review all my answers again?” When they saw “review check results” each mentioned that he or she would never want to go back through each item.

Recommendations

- o The “finished/not finished” buttons should be removed. Respondents should only see the page if there were errors on their form. In the case of errors, they should be listed with detailed information about where the errors occurred, and a dropdown box should appear below this list so that respondents can jump to the pages with errors.
- o If this page cannot be omitted for cases without errors, it should be reorganized with the “Form check results” underneath “Review your form check results” to avoid having respondents scroll up and down to find this information.

Form Actions Menu

Feedback From Participants

- Four of the 24 total respondents wondered why they were brought back to this page after having completed the survey. They thought that after the “Form Status” page the survey was completed. Respondent 10 thought that the survey should have ended simply with a page that says, “Thank you for completing this survey.” Another respondent thought that the survey should be reworked so that the user is not considered “finished” until he or she is done with all that can possibly be done, including generating a report, changing a password, etc.

“Go” Form Status

- Only one respondent of the total 24 respondents immediately knew that in order to go back into the survey once it was marked “finished,” she would first have to change her form to be “not finished.” However, even this respondent mentioned that was confusing. She suggested adding a sentence to the page explaining that if you want to go back to a finished survey, you must first change the form status to “not finished.”
- The other 23 respondents showed signs of difficulty when returning to a section of the survey once it was marked “finished.” Typically, the respondent would select a section and click “go.” He or she would return to the main “form actions menu.” Once respondents realized that their first or second tries did not work correctly, they read the instructions carefully and eventually realized they had to change the form status to “not finished.” Respondent 9 said that this process “was a bit awkward.”
- Respondent 4 incorrectly thought that the point of “Form Status” was to let the users know where they had left off.

- Respondent 7 said, “I don’t know why you need this on this page” in reference to the “form status” option. She said that the program should already know if you are finished or not based on whether you have answered all of the questions.

“Go” Generate Report

- To many respondents the function of “generate report” was unclear. The majority of respondents mentioned that they would never look at their reports and that this option is unnecessary. For instance, Respondent 9 said that the “generate report” option “seemed like it was just there to complicate things.”
- Many times, when respondents wanted to go to the “generate report” option, they clicked the “Report Types” hyperlink instead. This brought them to the “generate report” section of the “help” menu, which was very complicated and confusing to them.
 - Respondent 12 saw the instructions and said, “I don’t understand this. I don’t know anything here. Never mind.”
 - Respondent 13, an individual who was very proficient with computers, saw this menu and said, “I don’t know XML. This is too complicated.”
 - Respondent 16 was overwhelmed when the help page opened. She thought it contained “too much information that seemed unrelated to what I was looking for.”
- Respondent 3 incorrectly thought the “Generate Report” action was used to “file the form electronically.”
- Respondent 23 was the only user who expressed a desire to generate a full report. She was interested in looking back at how she responded to the questions, and she also mentioned that it would be nice to have for her records.

“Go” Change Password

- All 23 respondents mentioned that they would not need to change the password because they were only completing this survey once.
- Respondent 23 suggested that on the login page, after logging in for the first time, a new window should pop up asking the user “would you like to change your password?” rather than asking it on the Form Actions Menu once the survey was already complete.

“Go” Secure Exit/Logout

- Respondents 6, 8, and 10 clicked the “Always logout properly to better protect your information” link instead of the “Go” button to logout. One of these respondents was lost in a help page and could not find her way back to the survey, because there were no directions on how to do so. She mentioned that some of these links should perform actions rather than take the user to a “help menu.”
- Even after reading aloud the instruction to “always logout properly to better protect your information,” several respondents simply closed the browser window to exit the survey.
- Respondent 23 did not see a need for a “secure logout.” She would complete this survey at home, she said, which is already secure.

Recommendations

- o The “Certificate” that states that the survey is successfully finished should be its own separate page to eliminate the respondents’ confusion about why they have returned to the beginning page. On this page, there should be a “generate report” (labeled “print my answers”) option and a “secure exit/logout” option. These are the only menu options that are useful to respondents once the survey has been completed.
- o Change “generate report” to “Print my Answers.”

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Appendix E. (Inter) Net Gain? Experiments to Increase Response

The paper included in this appendix was presented at the National Conference of the American Association for Public Opinion Research in Miami, Florida on May 13, 2005. It focuses on using monetary incentives to increase overall response and internet response when both mail and internet choices are offered to respondents. It was written by Steven Tourkin, Randall Parmer, Shawna Cox, and Andrew Zukerberg, of the U.S. Bureau of the Census.

This paper includes the following sections:

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Introduction

The Teacher Follow-up Survey (TFS) is a component of the Schools and Staffing Survey (SASS). TFS uses self-administered questionnaires. A sample of teachers who completed the SASS Teacher Questionnaire last year was selected for participation in TFS. Researchers use the results to understand retention of teachers in public and private schools. In addition, the results provide researchers insight to teachers' job satisfaction. TFS is unique in that it draws information from both current and former teachers. Results from prior TFS administrations have been used to

- analyze changes in the teacher labor force over time;
- develop incentive programs to encourage teacher retention; and
- understand the effects of school practices and policies on teachers' decisions to stay in or leave the profession.

A goal of the 2004–05 TFS was to increase (or at least maintain) overall self-administered response rates by offering an internet reporting option (in addition to the paper questionnaire) and by providing a monetary incentive to respondents. It also was desirable to maximize the internet responses, as questionnaires administered via the Internet can reduce errors in survey data by invoking automatic edits. This can potentially save resources during data processing.

TFS uses two different questionnaires—a current teacher questionnaire, with 53 questions, and a former teacher questionnaire, with 40 questions. Teachers are contacted at their home address if they provided one during SASS. It is not clear how many teachers have internet access at home, or how many might decide to use the internet access at their school or job to respond to TFS. In order to encourage internet response, the internet option was offered before the paper option. To further boost the internet response rate, a \$10 incentive gift card was given to half of the respondents at the first contact (i.e., prior to the mail option). It was hoped that these treatments would yield higher internet response rates and total response rates.

Background

In recent years there has been a great push to offer an internet mode of data collection in government surveys. Griffin, Fischer, and Morgan (2001) suggest three potential advantages of an internet mode over mail: 1) improved response rates by offering an alternative mode of data collection; 2) potential for cost savings through reduction in mailing expenses; and 3) increased data quality compared to paper self-administered questionnaires due to the automation of skip patterns, range checks, and consistency edits. Many studies are finding that adding an internet option does not increase response rates, and, in some cases, the internet option has been found to negatively impact response rates. Griffin et al. (2001) found that offering a combined mail and internet option lowered the overall initial response rate for a household survey by almost 6 percent. Warner (2004) also found a lower final response rate when respondents were offered both modes compared with groups offered only internet initially, followed by a mailed questionnaire. Interestingly, both studies noted a low internet completion rate. In the Griffin et al. (2001) study, response by Internet was less than 3 percent of overall response. In the study conducted by Warner (2004), response by Internet ranged from 11.2 percent to 19.6 percent depending on the treatment group. Tedesco, Zukerberg, and Nichols (1999) had an overall internet response rate of less than 2 percent in testing an internet version of the Library Media Center Survey (LMC, which was a component of the 1999–2000 SASS). Improvements made to allow easier access during the full-scale survey in 2000 did increase internet response to nearly 20 percent.

To combat this lower response rate, some self-administered surveys have experimented with different ways to encourage internet response. On the LMC, Nichols et al. (2001) attempted to increase web response by utilizing varying motivational messages. The group that received stronger encouragement at each stage of data collection had twice the internet response than the group with less encouragement (although total response was about the same). On the 2001–02 Private School Universe Survey (PSS), the internet option was offered three different ways: (1) internet and mail options were offered together (internet response of 11.2 percent); (2) the internet option was offered first, with a mention of forthcoming mail questionnaire (internet response of 16.5 percent); and (3) the internet option was offered first, with no mention of the mail questionnaire (internet response of 19.6 percent) (Warner 2004). As PSS was school-based (no specific respondent required) and TFS was person-based, the second and third treatments, those with the higher internet response rates, also were incorporated into the design of this TFS test.

Incentives have long been recognized as an effective method to increase overall response to a mail survey. (See Church [1993] for a meta-analysis on the subject.) In recent years, government agencies, including the Census Bureau, have experimented with the use of incentives to boost response rates (Leslie and Bryson 2003). In order for incentives to be cost-effective for TFS, the number of respondents requiring field follow-up needs to be reduced. Most studies have not looked at the overall cost and response rate trade-off.

Methods

Of the 63,135 teachers who completed the SASS teacher questionnaire, 8,297 were selected by random sample to participate in TFS. Of these, 559 did not have sufficient contact information and were excluded from the experiment. The remaining 7,738 cases were divided into six treatment groups. The groups varied on three dimensions, which included offering an internet option, offering a prepaid \$10 incentive, and notifying respondents in the internet groups of a paper option in the near future.

Groups 1 and 2 were not given the option of completing the survey on the Internet and were sent only paper questionnaires throughout the duration of the experiment. Groups 3 through 6 were initially given the internet option and shortly afterwards were given the paper option as well. However, groups 3 and 4 were not made aware that they would receive paper versions of TFS a week later. Groups 5 and 6 were told of the forthcoming paper questionnaire in the initial letters they received requesting their participation in TFS. Finally, these six groups were further broken down into incentive panels. Groups 1, 3, and 5 were given a \$10 incentive card with the first mailing of TFS materials. The remaining groups were not offered any kind of incentive. Table E-1 documents the number of respondents that were assigned to each group initially. Cases that had inaccurate or unreachable addresses were removed from the experiment. Table E-1 also shows the resulting final sample sizes.

Table E-1. Characteristics of treatment groups: 2004–05

Group and mode	Incentive offered	Original sample size	Final sample size
1: No Internet	Yes	1,266	1,074
2: No Internet	No	1,340	1,147
3: Internet, without mention of mailout 1 week later	Yes	1,266	1,096
4: Internet, without mention of mailout 1 week later	No	1,292	1,100
5: Internet, with mention of mailout 1 week later	Yes	1,266	1,067
6: Internet, with mention of mailout 1 week later	No	1,308	1,131

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

At the beginning of the experiment, all teachers were mailed either a letter offering the internet option (Groups 3–6) or a letter and questionnaire (Groups 1–2) at the same time. The \$10 incentive card was included in this mailing for Groups 1, 3, and 5. The non-internet groups were mailed a reminder postcard approximately 10 days later. At the same time, the internet groups were mailed questionnaires and reminded about their internet option. Approximately 6 weeks after the original mailout, nonresponding teachers were mailed a second questionnaire. The internet groups again were reminded about their internet option. Approximately 4 weeks following the second mailout, remaining nonrespondents were assigned for field follow-up. Table E-2 shows the dates of each of these treatments for each group.

The incentive card was an American Express gift card preloaded with \$10. Teachers could use the card anywhere the card is accepted. Respondents were given an 800-number to call if they had any problems using the card.

Respondents offered the internet reporting option were given an 800-number as well as an e-mail address to assist with any questions or problems they encountered.

Table E-2. Timing of treatments, by group and mode: 2004–05

Group and mode	Original mailout			First reminder		Second reminder, via e-mail ¹	Second mailout	End of mail/ internet phase
	Advance letter with internet option	Advance letter with questionnaire	Incentive card	Reminder postcard	Questionnaire with reminder letter			
1: No Internet	†	Jan. 21	Jan. 21	Jan. 31	†	Feb. 11	Mar. 10	Apr. 15
2: No Internet	†	Jan. 21	†	Jan. 31	†	Feb. 11	Mar. 10	Apr. 15
3: Internet, without mention of mailout 1 week later	Jan. 21	†	Jan. 21	†	Feb. 1	Feb. 11	Mar. 10	Apr. 15
4: Internet, without mention of mailout 1 week later	Jan. 21	†	†	†	Feb. 1	Feb. 11	Mar. 10	Apr. 15
5: Internet, with mention of mailout 1 week later	Jan. 21	†	Jan. 21	†	Feb. 1	Feb. 11	Mar. 10	Apr. 15
6: Internet, with mention of mailout 1 week later	Jan. 21	†	†	†	Feb. 1	Feb. 11	Mar. 10	Apr. 15

† Not applicable.

¹ E-mail reminders were sent to approximately 1,500 teachers for whom staff was able to obtain addresses. The impact of this treatment is not covered in this report.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Results

The design reveals the relative impact of the different treatments on increasing overall self-response rates and increasing response by Internet. The response rates were calculated at the end of the mail/internet phase of data collection. TFS has an in-person follow-up of nonrespondents after the mail/internet phase where we expect to convert the nonrespondents and obtain a final response rate of approximately 90 percent across all treatment groups. As the field follow-up is more expensive, it is desirable to maximize response prior to field follow-up, and the analysis focuses on the response before field follow-up.

In analyzing the results, the total, mail only, and Internet only weighted response rates for each treatment group as well as various combinations of these groups were calculated at the end of the mail/internet phase of data collection. The variance associated with these response rates (r) was calculated using the following formula:

$$\frac{1}{n} \sum_{i=1}^n (r_i - \bar{r})^2 .$$

The response rates for each of the treatment groups, or combinations of groups, were compared against one another and tested at the 5 percent significance level.

The total response rates, mail response rate, and internet response rates are summarized for each group in table E-3. Analyses of differences between groups follow.

Table E-3. Total, mail, and internet weighted response rates, by group: 2004–05

Group	Total response		Mail response		Internet response	
	Percent	Variance	Percent	Variance	Percent	Variance
1	52.1	0.00044	52.1	0.00044	†	†
2	45.5	0.00040	45.5	0.00040	†	†
3	46.6	0.00050	21.9	0.00028	24.6	0.00042
4	44.1	0.00059	25.3	0.00034	18.8	0.00024
5	46.3	0.00051	23.7	0.00039	22.6	0.00021
6	38.6	0.00064	23.3	0.00035	15.3	0.00027

† Not applicable.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Total Response Rates—Mode Treatment Effects

Mail Only (Groups 1 + 2) Versus Mail and Internet (Groups 3 + 4 + 5 + 6)

The impact of providing an internet response option in addition to the mail option is shown in table E-4. As noted, the internet option was provided prior to the mailout of the questionnaire. The results show that the overall response of the mail only group, with a 48.8 percent response, exceeded that of the mail and internet groups, with a 43.9 percent response. This difference is significant ($p < .05$) and is consistent with some of the previous studies as noted earlier.

Table E-4. Weighted response rates, by type of group: 2004–05

Type of group	Percent	Variance
Mail only (groups 1 + 2)	48.8	0.00019
Mail and Internet (groups 3 + 4 + 5 + 6)	43.9	0.00016

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Mail Only (Groups 1 + 2) Versus Internet A (Groups 3 + 4) Versus Internet B (Groups 5 + 6)

Table E-5 shows the impact of providing the mail only response option versus the internet response options broken out by the two variations—informing respondents that they would receive a paper questionnaire approximately a week later (groups 5 and 6), and offering the internet option without

informing them (groups 3 and 4). The results show that the overall response for the mail only group is significantly higher than the internet with mention of mail group ($p < .05$). The rate difference between the mail only group and the internet without mention of mail group is not significant. Consequently, the worst outcome resulted from offering respondents a known choice of mail and internet responses.

Table E-5. Total weighted response rates for the mail only groups, the internet without mention of mail option groups, and the internet with mention of mail option groups: 2004–05

Type of group	Percent	Variance
Mail only (groups 1 + 2)	48.8	0.00019
Internet without mention of mail (groups 3 + 4)	45.4	0.00026
Internet with mention of mail (groups 5 + 6)	42.4	0.00030

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Internet Response Rates Without Mail Mention (Groups 3 + 4) Versus Internet Response Rates With Mail Mention (Groups 5 + 6)

Table E-6 shows the impact on internet response rates of providing the internet response option broken out by the two variations—informing respondents that they would receive a paper questionnaire approximately a week later (groups 5 and 6), and offering the internet option without informing them (groups 3 and 4). While the internet response rate for the group without mention of the mail option is somewhat higher, the result is not significant.

Table E-6. Total, mail, and internet weighted response rates, by type of internet group: 2004–05

Type of internet group	Total response		Mail response		Internet response	
	Percent	Variance	Percent	Variance	Percent	Variance
Internet without mention of mail (groups 3 + 4)	45.4	0.00026	23.6	0.00018	21.7	0.00017
Internet with mention of mail (groups 5 + 6)	42.4	0.00030	23.5	0.00019	18.9	0.00014

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Impact of Incentives

Overall Impact of Incentives: Incentives (Groups 1 + 3 + 5) Versus No Incentives (Groups 2 + 4 + 6)

The overall impact of incentives is shown by comparing the response rates of the teachers who were provided incentives against those who were not. The results in table E-7 show that the overall response of the incentive groups, with a 48.3 percent response, significantly exceeded that of the nonincentive groups, with a 42.8 percent response ($p < .05$).

Table E-7. Total weighted response rates, by incentive treatment: 2004–05

Incentive treatment	Percent	Variance
Incentive groups (groups 1 + 3 + 5)	48.3	0.00014
No incentive groups (groups 2 + 4 + 6)	42.8	0.00020

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Impact of Incentives Within Mode (Group 1 Response Minus Group 2 Response) Versus (Group 3 Response Minus Group 4 Response) Versus (Group 5 Response Minus Group 6 Response)

Table E-8 examines whether the incentive impacted the treatment groups differently. While the increase in response resulting from the incentive differed between the groups, the results were not significant.

Table E-8. Additional response as a result of incentives, by type of group: 2004–05

Type of group	Percent	Variance
Mail only (groups 1 + 2)	6.6	0.00083
Internet without mention of mail (groups 3 + 4)	2.5	0.00108
Internet with mention of mail (groups 5 + 6)	7.7	0.00115

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Impact of Incentives on Internet Response: Group 3 Versus Group 4 and Group 5 Versus Group 6

Table E-9 examined whether or not the incentive impacted the internet response rate. The results show that both internet treatment groups had a higher internet response rate when offered the incentive ($p < .05$).

Table E-9. Internet weighted response rates, by incentive treatment and type of internet group: 2004–05

Type of internet group	Incentive		No incentive	
	Percent	Variance	Percent	Variance
Internet without mention of mail (groups 3 + 4)	24.6	0.00042	18.8	0.00024
Internet with mention of mail (groups 5 + 6)	22.6	0.00021	15.3	0.00027

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Current and Former Teacher Documentation Data Files,” 2004–05.

Impact of Monetary Incentives and Internet Response on Costs

The incentives cost approximately \$50,000 in total, including administrative expenses. Table E-7 shows that the incentives increased the prefield response by 5.5 percent (approximately 200 cases). The variable cost per field case was approximately \$150 per case; the provision of incentives saved \$30,000 in field costs. Therefore, providing the incentives had a net cost of \$20,000.

The costs of adding the internet option included authoring and testing the internet questionnaire, preparing the internet case management system for this survey, and developing programs to reformat internet data to combine with the keyed questionnaire data at the beginning of data processing. Savings from the internet responses included data keying for those cases as well as less data review during processing as a result of automated edits in the questionnaire. The costs of adding the internet option far exceeded the savings, with the net costs exceeding \$100,000.

Implications

Adding Internet Options—Net Gain?

No, net loss. The impact on response of adding the internet option was negative—the response rate of the mail-only group exceeded the combined internet groups by 4.8 percent (table E-4). When the mail group was compared to the internet groups separately, the mail group’s response was significantly higher than

the internet group with mention of the mail option, but not the internet group without mention of the mail option (table E-5). It appears that total response can be maximized for TFS by offering mail only. Recognizing that it may be desirable to add the internet option for reasons other than response rates, it should be offered without mentioning the mail option.

Providing Incentives

The overall impact of providing the \$10 incentive did increase the response rate by 5.5 percent (table E-7), but it did not pay for itself even with the reduction in field costs. While there was a net cost to providing the incentives, it appears to be a desirable treatment. Further, the incentive also increased internet response among both internet treatment groups (table E-9), but as noted, the total response of the internet groups was lower than the mail-only group.

Conclusions

It appears that the best response for TFS can be achieved by offering respondents mail questionnaires. Offering a small incentive increases initial response and may increase final response. It may be worth testing a \$5 incentive to see if it could pay for itself. Adding an internet option negatively impacts total response. The negative impact can be reduced by offering the internet option initially without mentioning that there will be a mail option. When an incentive is included with this treatment, approximately half of the responses received at the end of the mail/internet phase of data collection are internet responses. While internet responses may lower data processing costs, the cost of adding the internet option far exceeds those savings. If managers of surveys administered by mail have limited resources, they should be spent on incentives rather than providing internet alternatives.

References

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Appendix F. Quality Assurance for TFS Keying and Mailout Operations

This appendix details the 2004–05 Teacher Follow-up Survey (TFS) quality assurance (QA) for both data keying and mailout operations. An overview of the data keying operations is provided in chapter 6, and the mailout procedures are covered in chapter 4. “Data keying” is the method by which the TFS data are captured and converted from paper to electronic format. The “mailout operations” include all procedures necessary for preparing TFS packages for distribution to respondents, including printing of all forms (such as letters, questionnaires, reminder postcards, etc.) and assembly of packages for sampled teachers.

The first section of this appendix, “2004–05 TFS Data Capture Operations,” describes the procedures for the data capture operations used by keying staff. The second section, “2004–05 TFS Cumulative Data Keying Verification Reports,” provides results of the verification of the data capture of the TFS questionnaires and the results, and the third section, “2004–05 TFS Mailout Operations Quality Assurance Summary,” provides the detailed procedures for quality assurance of the mailout operations and the results.

2004–05 TFS Data Capture Operations

The 2004–05 TFS data were captured, or converted from paper to electronic format, using manual data keying. The questionnaires were split up into groups called “batches” within questionnaire type and manually keyed. Manual data keying was accomplished using a Key from Paper (KFP) data capture system. The KFP system is programmed to present screens of questionnaire items to data keying staff, who page through the questionnaire and key any entries into the appropriate fields on the screens. The KFP system performs various edits as the data are keyed.

Once all batches of questionnaires were keyed and data entry was complete, images of TFS former and current teacher questionnaires were captured. The image files were used during subsequent steps of data processing to view the actual questionnaires online. All KFP entries were 100 percent verified by the keying staff, meaning that each field was keyed twice, and the results were compared automatically for discrepancies, and subsequently verified. The verification during this operation allowed up to a 1 percent error on a field-to-field basis. Unacceptable batches of questionnaires in which there was more than a 1 percent error were 100 percent verified a second time by keying staff.

Once the keying and verification were complete, the TFS datasets were ready to be released to Census analysts to begin the next step of data processing.

2004–05 TFS Cumulative Data Keying Verification Reports

This section details the results of the verification of the data keying. Exhibit F-1 provides results from the verification of the TFS data keying. The total error rates in the table are computed by dividing the total number of keying errors by the total number of keyed fields. The total error rate was 0.66 percent for the former teacher questionnaires and 0.45 percent for the current teacher questionnaires, yielding an overall error rate of 0.49 percent for TFS data keying.

Exhibit F-1. Cumulative key from paper (KFP) data keying verification report, by questionnaire: 2004–05

KFP data keying verification	Total	Questionnaire for Former Teachers 100 percent verified	Questionnaire for Current Teachers 100 percent verified
Unit count (batches)	371	139	232
Accepted	0	0	0
Rejected	0	0	0
Keyed documents	6,670	2,419	4,251
Verified documents	6,670	2,419	4,251
Keyed records	109,953	28,545	81,408
Verified records	109,993	28,540	81,453
Keyed fields	1,572,310	341,882	1,230,428
Verified fields	1,571,932	341,506	1,230,426
Charge field errors	6,496	1,721	4,775
Charge error rate	0.41%	0.50%	0.39%
Total errors	7,780	2,238	5,542
Total error rate	0.49%	0.66%	0.45%

NOTE: Detail may not sum to totals because of rounding.

SOURCE: *Quality Assurance for TFS Keying and Mailout Operations*, U.S. Census Bureau, 2005.

Exhibit F-2 provides the distribution of keying errors (from exhibit F-1, above) by the type of error. Errors due to data omission (keying staff accidentally missing a field while keying), finger error (keying staff mistyping an entry), and procedure error (keying staff not following part of the keying procedure correctly) were the greatest in number for TFS.

Exhibit F-2. Distribution of keying errors, by questionnaire and type of error: 2004–05

Type of error (code and description)	Questionnaire for Former Teachers		Questionnaire for Current Teachers	
	Number of errors	Percentage of errors	Number of errors	Percentage of errors
Total errors	2,238	100.00	5,542	100.00
1 Screening error	0	0.00	0	0.00
2 Data omission	622	27.79	2,186	39.44
3 Duplicate data	0	0.00	0	0.00
4 Did not hold down numeric shift	0	0.00	0	0.00
5 Did not hold down alpha shift	0	0.00	0	0.00
6 Manual duplication error	0	0.00	0	0.00
7 Auto duplication error	0	0.00	0	0.00
8 Finger error	500	22.34	1,150	20.75
9 Procedure error	599	26.76	1,439	25.97
10 Undeterminable data	0	0.00	0	0.00
11 Keyer/verifier in error	0	0.00	0	0.00
12 Code error	300	13.40	717	12.94
13 Machine error	0	0.00	0	0.00
14 Supervisor error	10	0.45	0	0.00
15 Explain in remarks	156	6.97	29	0.52
16 Procedure modification	51	2.28	21	0.38

NOTE: Detail may not sum to totals because of rounding.

SOURCE: *Quality Assurance for TFS Keying and Mailout Operations*, U.S. Census Bureau, 2005.

2004–05 TFS Mailout Operations Quality Assurance Summary

This section details the QA plan for the mailout operations for the 2004–05 TFS. All packages that were mailed to respondents and field representatives were mailed from Jeffersonville, Indiana, by the Census Bureau clerical processing staff.

All TFS forms and questionnaires were custom produced on *docuprint* equipment. The docuprint equipment allowed for printing and labeling questionnaires in one operation. The system was loaded with images of each questionnaire page, and a file of variable data for each respondent. The system can be programmed to print variable data that are specific to that respondent on any page of the questionnaire. For the 2004–05 TFS, docuprint was used to print variable data—the name and address of the sample teacher, the control number and associated barcode—on the cover page of the questionnaires. It also printed identification barcodes on each questionnaire page. It inserted the sampled teachers' names and addresses, as well as internet user names and passwords for respondents in the internet groups, directly into the letters. All blank questionnaires, letters, postcards, and other custom forms were also produced using the docuprint equipment.

For questionnaire booklets, the docuprint equipment loaded one 17-inch by 11-inch sheet at a time. Four questionnaire pages (8.5 x 11 inches, front and back) were printed onto this sheet. Once all sheets for a questionnaire booklet were completed, a sample of the work was examined to ensure that no errors had occurred. When an error was found, an expanded inspection examined the questionnaires that were produced before and after the detected questionnaire to determine if a systematic error had taken place. Once quality assurance of the printing was completed, the sheets went through a binding operation using Duplo Booklet Maker equipment. The Booklet Maker read the barcode to determine when the designated number of sheets for a particular questionnaire was loaded into the machine, and then folded and stapled it twice in the spine, and trimmed the right-side vertical edge of the booklet. Booklets were subjected to sample inspections and expanded inspections when defects were detected. The docuprinting of all letters, questionnaires, postcards, and other forms was inspected for damage and incorrect presentation.

The assembly of questionnaire packages for sampled teachers was inspected to assure that nothing was damaged, missing, contained undisclosed information, or was incorrectly presented. The results of the mailout QA, including error remarks, for all TFS mailout operations can be found in exhibits F-3 through F-5 in this section of the appendix.

Exhibit F-3. Docuprint quality assurance summary, by type of inspection and form: 2004–05

Form	Mailout	Number printed	Sample inspection			Expanded inspection			Date
			Number inspected	Number defective	Percent defective	Number inspected	Number defective	Percent defective	
Printing total	†	96,404	2,342	0	0.00	0	0	0.00	†
Principal letter (TFS-11) Teacher Status Form (TFS-1)	Advance Initial	11,350 11,265	24 53	0 0	0.00 0.00	0 0	0 0	0.00 0.00	10/1/04 10/5/04
Postcard reminder (TFS-8) Teacher Status Form (TFS-1)	Reminder Nonresponse follow-up	11,252 52	80 3	0 0	0.00 0.00	0 0	0 0	0.00 0.00	10/6/04 10/22/04
Teacher Status Form (TFS-1)	Nonresponse telephone follow-up	5,535	30	0	0.00	0	0	0.00	10/25/04
Teacher Status Form (TFS-1)	Nonresponse follow-up	54	4	0	0.00	0	0	0.00	10/26/04
Teacher Status Form (TFS-1)	Nonresponse follow-up	48	3	0	0.00	0	0	0.00	11/9/04
Internet user name/ password card (TFS-20)	Initial panel 1	1,225	60	0	0.00	0	0	0.00	1/18/05
Panel 1 teacher letter (TFS-12(L))	Initial panel 1	1,225	60	0	0.00	0	0	0.00	1/18/05
Questionnaire for Former Teachers (TFS-2)	Initial panel 1	523	30	0	0.00	0	0	0.00	1/19/05
Questionnaire for Current Teachers (TFS-3)	Initial panel 1	762	36	0	0.00	0	0	0.00	1/19/05
Panel 1 teacher letter (TFS-12(L))	Initial panel 1	67	6	0	0.00	0	0	0.00	1/20/05
Questionnaire for Former Teachers (TFS-2)	Initial panel 1	26	3	0	0.00	0	0	0.00	1/20/05
Questionnaire for Current Teacher (TFS-3)	Initial panel 1	77	6	0	0.00	0	0	0.00	1/20/05
Panel 1 teacher letter (TFS-12(L))	Initial panel 1	38	2	0	0.00	0	0	0.00	1/21/05
Questionnaire for Current Teachers (TFS-3)	Initial panel 1	2	2	0	0.00	0	0	0.00	1/21/05
Panel 2 teacher letter (TFS-13(L))	Initial panel 2	1,292	60	0	0.00	0	0	0.00	1/18/05
Questionnaire for Former Teachers (TFS-2)	Initial panel 2	554	30	0	0.00	0	0	0.00	1/20/05
Questionnaire for Current Teachers (TFS-3)	Initial panel 2	739	31	0	0.00	0	0	0.00	1/20/05
Panel 2 teacher letter (TFS-13(L))	Initial panel 2	97	6	0	0.00	0	0	0.00	1/20/05

See notes at end of exhibit.

**Exhibit F-3. Docuprint quality assurance summary, by type of inspection and form: 2004–05—
Continued**

Form	Mailout	Number printed	Sample inspection			Expanded inspection			Date
			Number inspected	Number defective	Percent defective	Number inspected	Number defective	Percent defective	
Questionnaire for Former Teachers (TFS-2)	Initial panel 2	49	3	0	0.00	0	0	0.00	1/20/05
Questionnaire for Current Teachers (TFS-3)	Initial panel 2	80	6	0	0.00	0	0	0.00	1/20/05
Panel 2 teacher letter (TFS-13(L))	Initial panel 2	35	2	0	0.00	0	0	0.00	1/21/05
Panel 2 teacher letter (TFS-13(L))	Initial panel 2	3	1	0	0.00	0	0	0.00	1/21/05
Panel 2 teacher letter (TFS-13(L))	Initial panel 2	458	60	0	0.00	0	0	0.00	2/10/05
Questionnaire for Former Teachers (TFS-2)	Initial panel 2	300	30	0	0.00	0	0	0.00	2/10/05
Questionnaire for Current Teachers (TFS-3)	Initial panel 2	158	30	0	0.00	0	0	0.00	2/10/05
Internet user name/ password card (TFS-20)	Initial panel 3	1,226	60	0	0.00	0	0	0.00	1/18/05
Panel 3 teacher letter (TFS-14(L))	Initial panel 3	1,225	60	0	0.00	0	0	0.00	1/18/05
Internet user name/ password card (TFS-20)	Initial panel 3	86	6	0	0.00	0	0	0.00	1/20/05
Panel 3 teacher letter (TFS-14(L))	Initial panel 3	86	6	0	0.00	0	0	0.00	1/20/05
Internet user name/ password card (TFS-20)	Initial panel 3	48	2	0	0.00	0	0	0.00	1/21/05
Panel 3 teacher letter (TFS-14(L))	Initial panel 3	48	2	0	0.00	0	0	0.00	1/21/05
Internet user name/ password card (TFS-20):	Initial panel 4	773	63	0	0.00	0	0	0.00	1/18/05
Panel 4 teacher letter (TFS-15(L))	Initial panel 4	1,254	67	0	0.00	0	0	0.00	1/19/05
Internet user name/ password card (TFS-20)	Initial panel 4	79	6	0	0.00	0	0	0.00	1/20/05
Panel 4 teacher letter (TFS-15(L))	Initial panel 4	79	6	0	0.00	0	0	0.00	1/20/05
Internet user name/ password card (TFS-20)	Initial panel 4	54	2	0	0.00	0	0	0.00	1/21/05
Panel 4 teacher letter (TFS-15(L))	Initial panel 4	54	2	0	0.00	0	0	0.00	1/21/05
Internet user name/ password card (TFS-20)	Initial panel 5	1,222	60	0	0.00	0	0	0.00	1/18/05

See notes at end of exhibit.

**Exhibit F-3. Docuprint quality assurance summary, by type of inspection and form: 2004–05—
Continued**

Form	Mailout	Number printed	Sample inspection			Expanded inspection			Date
			Number inspected	Number defective	Percent defective	Number inspected	Number defective	Percent defective	
Panel 5 teacher letter (TFS-16(L))	Initial panel 5	1,226	64	0	0.00	0	0	0.00	1/20/05
Internet user name/ password card (TFS-20)	Initial panel 5	67	6	0	0.00	0	0	0.00	1/20/05
Panel 5 teacher letter (TFS-16(L))	Initial panel 5	67	6	0	0.00	0	0	0.00	1/20/05
Internet user name/ password card (TFS-20)	Initial panel 5	47	2	0	0.00	0	0	0.00	1/21/05
Panel 5 teacher letter (TFS-16(L))	Initial panel 5	47	2	0	0.00	0	0	0.00	1/21/05
Internet user name/ password card (TFS-20)	Initial panel 6	1,271	64	0	0.00	0	0	0.00	1/18/05
Panel 6 teacher letter (TFS-17(L))	Initial panel 6	1,269	62	0	0.00	0	0	0.00	1/18/05
Internet user name/ password card (TFS-20)	Initial panel 6	82	6	0	0.00	0	0	0.00	1/20/05
Panel 6 teacher letter (TFS-17(L))	Initial panel 6	82	6	0	0.00	0	0	0.00	1/20/05
Internet user name/ password card (TFS-20)	Initial panel 6	41	3	0	0.00	0	0	0.00	1/21/05
Panel 6 teacher letter (TFS-17(L))	Initial panel 6	41	2	0	0.00	0	0	0.00	1/21/05
Postcard reminder (TFS-8)	Reminder panel 1–2	2,517	60	0	0.00	0	0	0.00	1/31/05
Postcard reminder (TFS-8)	Reminder panel 1–2	89	3	0	0.00	0	0	0.00	1/31/05
Internet user name/ password card (TFS-20)	Reminder panel 3–6	5,132	91	0	0.00	0	0	0.00	1/31/05
Internet reminder letter (panels 3–6) (TFS-18(L))	Reminder panel 3–6	5,132	91	0	0.00	0	0	0.00	1/31/05
Questionnaire for Former Teachers (TFS-2)	Reminder panel 3–6	2,134	31	0	0.00	0	0	0.00	1/31/05
Questionnaire for Current Teachers (TFS-3)	Reminder panel 3–6	2,852	51	0	0.00	0	0	0.00	1/31/05
Questionnaire for Current Teachers (TFS-3)	Reminder panel 3–6	171	31	0	0.00	0	0	0.00	2/2/05
Questionnaire for Former Teachers (TFS-2)	Regional Office distribution	1,725	15	0	0.00	0	0	0.00	2/7/05
Questionnaire for Former Teachers (TFS-2)	Regional Office distribution	77	3	0	0.00	0	0	0.00	2/9/05

See notes at end of exhibit.

**Exhibit F-3. Docuprint quality assurance summary, by type of inspection and form: 2004–05—
Continued**

Form	Mailout	Number printed	Sample inspection			Expanded inspection			Date
			Number inspected	Number defective	Percent defective	Number inspected	Number defective	Percent defective	
Questionnaire for Current Teachers (TFS-3)	Regional Office distribution	25	3	0	0.00	0	0	0.00	2/9/05
Internet user name/ password card (TFS-20)	1 st follow-up panel 1–6	2,831	90	0	0.00	0	0	0.00	3/7/05
Panel 2 teacher letter (TFS-13(L))	1 st follow-up panel 1–6	686	60	0	0.00	0	0	0.00	3/8/05
Second mailout letter (panels 3–6) (TFS-19(L))	1 st follow-up panel 1–6	2,831	90	0	0.00	0	0	0.00	3/8/05
Second mailout letter (Panels 1–2) (TFS-21(L))	1 st follow-up panel 1–6	1,544	60	0	0.00	0	0	0.00	3/8/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up panel 1–6	2,178	92	0	0.00	0	0	0.00	3/10/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up panel 1–6	1,290	90	0	0.00	0	0	0.00	3/10/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up panel 1–6	1,609	32	0	0.00	0	0	0.00	3/9/05
Panel 1 teacher letter (TFS-12(L))	1 st follow-up panel 1–6	78	9	0	0.00	0	0	0.00	3/9/05
Panel 2 teacher letter (TFS-13(L))	1 st follow-up panel 1–6	24	3	0	0.00	0	0	0.00	3/9/05
Panel 1 teacher letter (TFS-12(L))	1 st follow-up panel 1–6	64	3	0	0.00	0	0	0.00	3/9/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up panel 1–6	88	6	0	0.00	0	0	0.00	3/9/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up panel 1–6	32	3	0	0.00	0	0	0.00	3/9/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up panel 1–6	46	6	0	0.00	0	0	0.00	3/9/05
Questionnaire for Former Teachers (TFS-2):	1 st follow-up switcher	53	3	0	0.00	0	0	0.00	3/9/05
Questionnaire for Current Teachers (TFS-3):	1 st follow-up switcher	142	30	0	0.00	0	0	0.00	3/9/05
Questionnaire for Former Teachers (TFS-2):	UAA cases ¹	116	6	0	0.00	0	0	0.00	3/28/05
Questionnaire for Current Teachers (TFS-3)	UAA cases ¹	73	6	0	0.00	0	0	0.00	3/28/05
Panel 1 teacher letter (TFS-12(L))	UAA cases ¹	70	6	0	0.00	0	0	0.00	3/28/05
Panel 2 teacher letter (TFS-13(L))	UAA cases ¹	119	6	0	0.00	0	0	0.00	3/28/05

See notes at end of exhibit.

**Exhibit F-3. Docuprint quality assurance summary, by type of inspection and form: 2004–05—
Continued**

Form	Mailout	Number printed	Sample inspection			Expanded inspection			Date
			Number inspected	Number defective	Percent defective	Number inspected	Number defective	Percent defective	
Questionnaire for Former Teachers (TFS-2)	UAA cases ¹	20	3	0	0.00	0	0	0.00	3/28/05
Questionnaire for Current Teachers (TFS-3)	UAA cases ¹	7	3	0	0.00	0	0	0.00	3/28/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up switcher	13	4	0	0.00	0	0	0.00	3/30/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up switcher	52	3	0	0.00	0	0	0.00	3/30/05
Questionnaire for Former Teachers (TFS-2)	Nonresponse field follow-up	2,035	45	0	0.00	0	0	0.00	4/14/05
Questionnaire for Current Teachers (TFS-3)	Nonresponse field follow-up	2,809	78	0	0.00	0	0	0.00	4/15/05

† Not applicable.

¹ UAA refers to “Undeliverable as Addressed.”

NOTE: Detail may not sum to totals because of rounding.

SOURCE: *Quality Assurance for TFS Keying and Mailout Operations*, U.S. Census Bureau, 2005.

Exhibit F-4. Duplo Booklet Maker inspection, by type of inspection and form: 2005

Form	Mailout	Number printed	Sample inspection			Expanded inspection			Date
			Number inspected	Number defective	Percent defective	Number inspected	Number defective	Percent defective	
Duplo total	†	13,616	902	0	0.00	0	0	0.00	†
Questionnaire for Former Teachers (TFS-2)	Initial panel 1	549	35	0	0.00	0	0	0.00	1/24/05
Questionnaire for Current Teachers (TFS-3)	Initial panel 1	841	82	0	0.00	0	0	0.00	1/24/05
Questionnaire for Former Teachers (TFS-2)	Initial panel 2	603	35	0	0.00	0	0	0.00	2/2/05
Questionnaire for Current Teachers (TFS-3)	Initial panel 2	822	64	0	0.00	0	0	0.00	2/2/05
Questionnaire for Former Teachers (TFS-2)	Initial panel 2	300	15	0	0.00	0	0	0.00	2/11/05
Questionnaire for Current Teachers (TFS-3)	Initial panel 2	158	15	0	0.00	0	0	0.00	2/11/05
Questionnaire for Former Teachers (TFS-2)	Regional Office distribution	77	15	0	0.00	0	0	0.00	2/10/05
Questionnaire for Current Teachers (TFS-3)	Regional Office distribution	25	15	0	0.00	0	0	0.00	2/10/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up panel 1–6	1,108	30	0	0.00	0	0	0.00	3/9/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up panel 1–6	1,727	84	0	0.00	0	0	0.00	3/9/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up panel 1–6	315	15	0	0.00	0	0	0.00	3/10/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up panel 1–6	395	45	0	0.00	0	0	0.00	3/10/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up panel 1–6	32	15	0	0.00	0	0	0.00	3/10/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up panel 1–6	46	30	0	0.00	0	0	0.00	3/10/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up panel 1–6	753	35	0	0.00	0	0	0.00	3/11/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up panel 1–6	855	45	0	0.00	0	0	0.00	3/11/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up switcher	53	15	0	0.00	0	0	0.00	3/9/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up switcher	142	15	0	0.00	0	0	0.00	3/9/05
Questionnaire for Former Teachers (TFS-2)	Nonresponse field follow-up	2,006	102	0	0.00	0	0	0.00	4/15/05
Questionnaire for Current Teachers (TFS-3)	Nonresponse field follow-up	2,809	195	0	0.00	0	0	0.00	4/15/05

† Not applicable.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: *Quality Assurance for TFS Keying and Mailout Operations*, U.S. Census Bureau, 2005.

Exhibit F-5. Package assembly quality assurance, by type of inspection and form: 2004–05

Form	Mailout	Number printed	Sample inspection			Expanded inspection			Date
			Number inspected	Number defective	Percent defective	Number inspected	Number defective	Percent defective	
Package assembly total	†	11,306	297	1	0.34	0	0	0.00	†
Teacher Status Form (TFS-1)	Initial	11,252	243	1	0.41	0	0	0.00	10/5/04
Teacher Status Form (TFS-1)	Nonresponse follow-up	54	54	0	0.00	0	0	0.00	10/28/04
Questionnaire for Former Teachers (TFS-2)	Initial Panel 1	554	554	0	0.00	0	0	0.00	1/24/05
Questionnaire for Current Teachers (TFS-3)	Initial Panel 1	781	781	0	0.00	0	0	0.00	1/24/05
Questionnaire for Former Teachers (TFS-2)	Initial Panel 2	651	651	0	0.00	0	0	0.00	1/21/05
Questionnaire for Current Teachers (TFS-3)	Initial Panel 2	770	770	0	0.00	0	0	0.00	1/21/05
Questionnaire for Former Teachers (TFS-2)	Initial Panel 2	300	300	0	0.00	0	0	0.00	2/11/05
Questionnaire for Current Teachers (TFS-3)	Initial Panel 2	158	158	0	0.00	0	0	0.00	2/11/05
Panel 3 Teacher Letter (TFS-14(L))	Initial Panel 3	1,367	1,367	0	0.00	0	0	0.00	1/24/05
Panel 4 Teacher Letter (TFS-15(L))	Initial Panel 4	1,419	1,419	0	0.00	0	0	0.00	1/21/05
Panel 5 Teacher Letter (TFS-16(L))	Initial Panel 5	1,340	1,340	0	0.00	0	0	0.00	1/24/05
Panel 6 Teacher Letter (TFS-17(L))	Initial Panel 6	1,387	1,387	0	0.00	0	0	0.00	1/21/05
Questionnaire for Former Teachers (TFS-2)	Reminder panel 3–6	2,112	2,112	0	0.00	0	0	0.00	1/31/05
Questionnaire for Current Teachers (TFS-3)	Reminder panel 3–6	2,849	2,849	0	0.00	0	0	0.00	2/1/05
Questionnaire for Current Teachers (TFS-3)	Reminder panel 3–6	170	170	0	0.00	0	0	0.00	2/1/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up panel 1–6	2,176	2,176	0	0.00	0	0	0.00	3/14/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up panel 1–6	2,973	2,973	0	0.00	0	0	0.00	3/14/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up panel 1–6	32	32	0	0.00	0	0	0.00	3/10/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up panel 1–6	46	46	0	0.00	0	0	0.00	3/10/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up switcher	53	53	0	0.00	0	0	0.00	3/10/05

See notes at end of exhibit.

**Exhibit F-5. Package assembly quality assurance, by type of inspection and form: 2004–05—
Continued**

Form	Mailout	Number printed	Sample inspection			Expanded inspection			Date
			Number inspected	Number defective	Percent defective	Number inspected	Number defective	Percent defective	
Questionnaire for Current Teachers (TFS-3)	1 st follow-up switcher	142	142	0	0.00	0	0	0.00	3/10/05
Questionnaire for Former Teachers (TFS-2)	UAA cases ¹	116	116	0	0.00	0	0	0.00	3/29/05
Questionnaire for Current Teachers (TFS-3)	UAA cases ¹	71	71	0	0.00	0	0	0.00	3/29/05
Questionnaire for Former Teachers (TFS-2)	1 st follow-up switcher	13	13	0	0.00	0	0	0.00	3/30/05
Questionnaire for Current Teachers (TFS-3)	1 st follow-up switcher	52	52	0	0.00	0	0	0.00	3/30/05

† Not applicable.

¹ UAA refers to “Undeliverable as Addressed.”

NOTE: Detail may not sum to totals because of rounding.

SOURCE: *Quality Assurance for TFS Keying and Mailout Operations*, U.S. Census Bureau, 2005.

Package Assembly error/remarks:

1/ One contents inserted incorrectly.

Appendix G. Changes Made to TFS Variables During Computer Edits, by Data File

Once the preliminary review of the Teacher Follow-up Survey (TFS) data was finished, the TFS records that were classified as completed interviews during the preliminary interview status recode (ISR) were submitted to a series of computer edits. These edits consisted of range checks, consistency edits, and blanking edits.

The first of the computer edits was the range check. The range check was used to delete entries that were outside the range of acceptable values that were set prior to the administration of TFS. The purpose of the range checks is to eliminate any outrageous values from the data files.

Most of the actual changes to the data were made during the consistency edit. The consistency edits identified inconsistent entries within each case and, whenever possible, corrected them. If the inconsistencies could not be corrected, the entries were deleted. These inconsistencies were both within an item and among several items. Consistency edits also filled in some items where data were missing or incomplete by using other information from the same data record.

Finally, the blanking edits deleted extraneous entries (e.g., situations where skip patterns were not correctly followed) and assigned the “not answered” code to items that the respondent should have answered but did not.

Tables G-1 and G-2 below show the percentage of total TFS records to which the computer edits made changes, by questionnaire item. Table G-1 corresponds to the Questionnaire for Former Teachers, and table G-2 corresponds to the Questionnaire for Current Teachers.

Table G-1. Total number of changes and percentage of records affected during computer edits for the former teacher data file, by variable: 2004–05

Variable	Total number of changes	Percentage of records affected	Variable	Total number of changes	Percentage of records affected	Variable	Total number of changes	Percentage of records affected
F0050	0	0.00	F0174	0	0.00	F0601	188	7.09
F0550	9	0.34	F0175	0	0.00	F0208	3	0.11
F0051	106	4.00	F0176	0	0.00	F0209	1	0.04
F0552	94	3.54	F0177	0	0.00	F0210	20	0.75
F5552	74	2.79	F0178	0	0.00	F0211	114	4.30
F0553	22	0.83	F0179	0	0.00	F0602	0	0.00
F5553	13	0.49	F0180	0	0.00	F0603	7	0.26
F0554	391	14.74	F0181	0	0.00	F0604	10	0.38
F5555	11	0.41	F0182	115	4.33	F0605	10	0.38
F5556	3	0.11	F0183	36	1.36	F0606	10	0.38
F0557	7	0.26	F0184	35	1.32	F0607	11	0.41
F0558	7	0.26	F0185	35	1.32	F0608	10	0.38
F0559	4	0.15	F0186	34	1.28	F0609	11	0.41
F0560	51	1.92	F0187	35	1.32	F0610	10	0.38
F0561	3	0.11	F0580	459	17.30	F0611	53	2.00
F0562	22	0.83	F0581	179	6.75	F5611	8	0.30
F0563	20	0.75	F0582	180	6.78	F9611	5	0.19
F0564	10	0.38	F0583	180	6.78	F0612	9	0.34
F0214	0	0.00	F0584	178	6.71	F0613	13	0.49
F0565	1	0.04	F0585	181	6.82	F0231	46	1.73
F0566	59	2.22	F0586	181	6.82	F0232	26	0.98
F0567	0	0.00	F0587	180	6.78	F0233	0	0.00
F0568	0	0.00	F0588	181	6.82	F0234	0	0.00
F0569	0	0.00	F0589	180	6.78	F0235	1	0.04
F0570	0	0.00	F0590	180	6.78	F0236	119	4.49
F0571	0	0.00	F0591	181	6.82	F0237	302	11.38
F0572	0	0.00	F0592	178	6.71	F0238	0	0.00
F0573	0	0.00	F0593	180	6.78	F0278	0	0.00
F0574	0	0.00	F0594	181	6.82	F0279	7	0.26
F0575	0	0.00	F0595	180	6.78	F5238	0	0.00
F0576	0	0.00	F0596	179	6.75	F0269	0	0.00
F0577	0	0.00	F0597	179	6.75	F0270	0	0.00
F0578	0	0.00	F0598	181	6.82	F0271	0	0.00
F0579	0	0.00	F0599	181	6.82	F0272	0	0.00
F0173	0	0.00	F0600	181	6.82			

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Former Teacher Documentation Data File," 2004–05.

Table G-2. Total number of changes and percentage of records affected during computer edits for the current teacher data file, by variable: 2004–05

Variable	Total number of changes	Percentage of records affected	Variable	Total number of changes	Percentage of records affected	Variable	Total number of changes	Percentage of records affected
F0050	1	0.02	F0083	0	0.00	F0118	0	0.00
F0051	8	0.17	F0084	0	0.00	F0119	0	0.00
F0052	73	1.53	F0085	0	0.00	F0120	0	0.00
F0053	517	10.82	F0086	0	0.00	F0121	0	0.00
F0054	668	13.99	F0087	0	0.00	F0122	0	0.00
F0055	158	3.31	F0088	0	0.00	F0123	0	0.00
F5055	67	1.40	F0089	0	0.00	F0124	0	0.00
F0056	6	0.13	F0090	0	0.00	F0125	0	0.00
F5056	6	0.13	F0091	0	0.00	F0126	0	0.00
F0057	0	0.00	F0092	0	0.00	F0127	0	0.00
F0058	145	3.04	F0093	0	0.00	F0128	59	1.24
F0059	0	0.00	F0094	0	0.00	F0129	150	3.14
F0060	0	0.00	F0095	0	0.00	F0130	593	12.42
F0061	0	0.00	F0096	0	0.00	F0131	0	0.00
F0062	0	0.00	F0097	0	0.00	F0132	0	0.00
F0063	0	0.00	F0098	0	0.00	F0133	0	0.00
F0064	0	0.00	F0099	0	0.00	F0134	0	0.00
F0065	0	0.00	F0100	0	0.00	F0135	0	0.00
F0066	0	0.00	F0101	0	0.00	F0136	3	0.06
F0067	0	0.00	F0102	0	0.00	F0137	31	0.65
F0068	0	0.00	F0103	0	0.00	F0138	204	4.27
F0069	0	0.00	F0104	0	0.00	F5138	0	0.00
F0070	0	0.00	F0105	0	0.00	F9000	77	1.61
F0071	0	0.00	F0106	0	0.00	F9005	77	1.61
F0072	0	0.00	F0107	0	0.00	F9010	78	1.63
F0073	140	2.93	F0108	0	0.00	F9015	73	1.53
F0074	0	0.00	F0109	0	0.00	F9020	69	1.44
F0075	2	0.04	F0110	0	0.00	F9025	47	0.98
F0076	0	0.00	F0111	0	0.00	F0144	76	1.59
F0077	0	0.00	F0112	0	0.00	F0145	65	1.36
F0078	0	0.00	F0113	0	0.00	F0146	73	1.53
F0079	0	0.00	F0114	0	0.00	F0147	70	1.47
F0080	0	0.00	F0115	0	0.00	F0148	73	1.53
F0081	0	0.00	F0116	0	0.00	F0149	77	1.61
F0082	0	0.00	F0117	0	0.00	F0150	69	1.44

See notes at end of table.

Table G-2. Total number of changes and percentage of records affected during computer edits for the current teacher data file, by variable: 2004–05—Continued

Variable	Total number of changes	Percentage of records affected	Variable	Total number of changes	Percentage of records affected	Variable	Total number of changes	Percentage of records affected
F0151	70	1.47	F0186	21	0.44	F0221	9	0.19
F0152	64	1.34	F0187	21	0.44	F0222	0	0.00
F0153	67	1.40	F0188	0	0.00	F0223	0	0.00
F0154	52	1.09	F0189	0	0.00	F0224	64	1.34
F0155	41	0.86	F0190	0	0.00	F0225	0	0.00
F0156	41	0.86	F0191	0	0.00	F0226	19	0.40
F0157	44	0.92	F0192	0	0.00	F0227	0	0.00
F0158	10	0.21	F0193	0	0.00	F0228	27	0.57
F0159	34	0.71	F0194	0	0.00	F0229	0	0.00
F0160	61	1.28	F0195	0	0.00	F0230	38	0.80
F0161	6	0.13	F0196	0	0.00	F0231	145	3.04
F0162	6	0.13	F0197	0	0.00	F0232	33	0.69
F0163	5	0.10	F0198	0	0.00	F0233	0	0.00
F0164	5	0.10	F0199	0	0.00	F0234	0	0.00
F0165	5	0.10	F0200	0	0.00	F0235	1	0.02
F0166	5	0.10	F0201	0	0.00	F0236	224	4.69
F0167	5	0.10	F0202	0	0.00	F0237	436	9.13
F0168	5	0.10	F0203	0	0.00	F0238	0	0.00
F0169	5	0.10	F0204	0	0.00	F0278	0	0.00
F0170	5	0.10	F0205	0	0.00	F0279	10	0.21
F0171	5	0.10	F0206	0	0.00	F5238	0	0.00
F0172	46	0.96	F0207	0	0.00	F0269	0	0.00
F0173	0	0.00	F0208	4	0.08	F0270	0	0.00
F0174	0	0.00	F0209	5	0.10	F0271	0	0.00
F0175	0	0.00	F0210	68	1.42	F0272	0	0.00
F0176	0	0.00	F0211	136	2.85			
F0177	0	0.00	F0212	0	0.00			
F0178	0	0.00	F0213	0	0.00			
F0179	0	0.00	F0214	0	0.00			
F0180	0	0.00	F0215	0	0.00			
F0181	34	0.71	F0216	0	0.00			
F0182	137	2.87	F0217	21	0.44			
F0183	21	0.44	F0218	4	0.08			
F0184	21	0.44	F0219	16	0.34			
F0185	21	0.44	F0220	1	0.02			

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Documentation Data File," 2004–05.

Appendix H. Percentage of TFS Variables Changed During Three Stages of Imputation, by Data File

Table H-1. Number of changes and percentage of records affected during stage 1–stage 3 imputation of the former teacher data file, by variable: 2004–05

Variable	Total		Stage 1		Stage 2		Stage 3	
	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected
F0173	70	2.64	0	0.00	70	2.64	0	0.00
F0174	82	3.09	0	0.00	82	3.09	0	0.00
F0175	75	2.83	0	0.00	75	2.83	0	0.00
F0176	82	3.09	0	0.00	82	3.09	0	0.00
F0177	76	2.86	0	0.00	76	2.86	0	0.00
F0178	83	3.13	0	0.00	83	3.13	0	0.00
F0179	75	2.83	0	0.00	75	2.83	0	0.00
F0180	76	2.86	0	0.00	76	2.86	0	0.00
F0181	35	1.32	35	1.32	0	0.00	0	0.00
F0182	82	3.09	82	3.09	0	0.00	0	0.00
F0183	90	3.39	0	0.00	90	3.39	0	0.00
F0184	88	3.32	0	0.00	88	3.32	0	0.00
F0185	96	3.62	0	0.00	96	3.62	0	0.00
F0186	104	3.92	0	0.00	104	3.92	0	0.00
F0187	92	3.47	0	0.00	92	3.47	0	0.00
F0208	26	0.98	0	0.00	26	0.98	0	0.00
F0209	31	1.17	31	1.17	0	0.00	0	0.00
F0210	11	0.41	0	0.00	11	0.41	0	0.00
F0211	10	0.38	0	0.00	10	0.38	0	0.00
F0214	27	1.02	23	0.87	4	0.15	0	0.00
F0231	186	7.01	186	7.01	0	0.00	0	0.00
F0232	66	2.49	0	0.00	47	1.77	19	0.72
F0233	1,097	41.35	991	37.35	99	3.73	7	0.26
F0234	35	1.32	3	0.11	32	1.21	0	0.00
F0235	35	1.32	3	0.11	32	1.21	0	0.00
F0236	51	1.92	0	0.00	51	1.92	0	0.00
F0237	120	4.52	0	0.00	120	4.52	0	0.00
F0238	287	10.82	0	0.00	287	10.82	0	0.00
F0269	0	0.00	0	0.00	0	0.00	0	0.00
F0270	0	0.00	0	0.00	0	0.00	0	0.00
F0271	0	0.00	0	0.00	0	0.00	0	0.00
F0272	0	0.00	0	0.00	0	0.00	0	0.00
F0278	287	10.82	0	0.00	287	10.82	0	0.00
F0279	287	10.82	0	0.00	287	10.82	0	0.00
F0550	30	1.13	0	0.00	0	0.00	30	1.13

See notes at end of table.

Table H-1. Number of changes and percentage of records affected during stage 1–stage 3 imputation of the former teacher data file, by variable: 2004–05—Continued

Variable	Total		Stage 1		Stage 2		Stage 3	
	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected
F0552	0	0.00	0	0.00	0	0.00	0	0.00
F0553	0	0.00	0	0.00	0	0.00	0	0.00
F0554	20	0.75	0	0.00	19	0.72	1	0.04
F0557	79	2.98	0	0.00	79	2.98	0	0.00
F0558	55	2.07	0	0.00	55	2.07	0	0.00
F0559	211	7.95	5	0.19	203	7.65	3	0.11
F0560	100	3.77	0	0.00	100	3.77	0	0.00
F0561	107	4.03	0	0.00	106	4.00	1	0.04
F0562	56	2.11	0	0.00	56	2.11	0	0.00
F0563	6	0.23	0	0.00	6	0.23	0	0.00
F0564	94	3.54	94	3.54	0	0.00	0	0.00
F0565	21	0.79	6	0.23	15	0.57	0	0.00
F0566	11	0.41	0	0.00	11	0.41	0	0.00
F0567	77	2.90	0	0.00	77	2.90	0	0.00
F0568	82	3.09	0	0.00	82	3.09	0	0.00
F0569	90	3.39	0	0.00	90	3.39	0	0.00
F0570	85	3.20	0	0.00	85	3.20	0	0.00
F0571	76	2.86	0	0.00	76	2.86	0	0.00
F0572	84	3.17	0	0.00	84	3.17	0	0.00
F0573	83	3.13	0	0.00	83	3.13	0	0.00
F0574	95	3.58	0	0.00	95	3.58	0	0.00
F0575	96	3.62	0	0.00	96	3.62	0	0.00
F0576	84	3.17	0	0.00	84	3.17	0	0.00
F0577	84	3.17	0	0.00	84	3.17	0	0.00
F0578	83	3.13	0	0.00	83	3.13	0	0.00
F0579	96	3.62	48	1.81	0	0.00	48	1.81
F0580	130	4.90	130	4.90	0	0.00	0	0.00
F0581	68	2.56	0	0.00	68	2.56	0	0.00
F0582	70	2.64	0	0.00	70	2.64	0	0.00
F0583	71	2.68	0	0.00	71	2.68	0	0.00
F0584	70	2.64	0	0.00	70	2.64	0	0.00
F0585	70	2.64	0	0.00	70	2.64	0	0.00
F0586	70	2.64	0	0.00	70	2.64	0	0.00
F0587	76	2.86	0	0.00	76	2.86	0	0.00
F0588	73	2.75	0	0.00	73	2.75	0	0.00
F0589	6	0.23	0	0.00	6	0.23	0	0.00
F0590	77	2.90	0	0.00	77	2.90	0	0.00
F0591	73	2.75	0	0.00	73	2.75	0	0.00
F0592	82	3.09	0	0.00	82	3.09	0	0.00
F0593	71	2.68	0	0.00	71	2.68	0	0.00

See notes at end of table.

Table H-1. Number of changes and percentage of records affected during stage 1–stage 3 imputation of the former teacher data file, by variable: 2004–05—Continued

Variable	Total		Stage 1		Stage 2		Stage 3	
	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected
F0594	69	2.60	0	0.00	69	2.60	0	0.00
F0595	72	2.71	0	0.00	72	2.71	0	0.00
F0596	70	2.64	0	0.00	70	2.64	0	0.00
F0597	71	2.68	0	0.00	71	2.68	0	0.00
F0598	73	2.75	0	0.00	73	2.75	0	0.00
F0599	67	2.53	0	0.00	67	2.53	0	0.00
F0600	69	2.60	0	0.00	69	2.60	0	0.00
F0601	63	2.37	0	0.00	63	2.37	0	0.00
F0602	39	1.47	0	0.00	39	1.47	0	0.00
F0603	32	1.21	0	0.00	32	1.21	0	0.00
F0604	34	1.28	0	0.00	34	1.28	0	0.00
F0605	39	1.47	0	0.00	39	1.47	0	0.00
F0606	37	1.39	0	0.00	37	1.39	0	0.00
F0607	44	1.66	0	0.00	44	1.66	0	0.00
F0608	41	1.55	0	0.00	41	1.55	0	0.00
F0609	33	1.24	0	0.00	33	1.24	0	0.00
F0610	44	1.66	0	0.00	44	1.66	0	0.00
F0611	1,955	73.69	1,879	70.83	76	2.86	0	0.00
F0612	136	5.13	0	0.00	115	4.33	21	0.79
F0613	29	1.09	0	0.00	29	1.09	0	0.00

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), “Former Teacher Restricted Use Data File,” 2004–05.

Table H-2. Number of changes and percentage of records affected during stage 1–stage 3 imputation of the current teacher data file, by variable: 2004–05

Variable	Total		Stage 1		Stage 2		Stage 3	
	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected
F0052	83	1.7	0	0.0	73	1.5	10	0.2
F0053	96	2.0	1	0.0	86	1.8	9	0.2
F0054	76	1.6	66	1.4	0	0.0	10	0.2
F0055	10	0.2	0	0.0	0	0.0	10	0.2
F0056	43	0.9	29	0.6	14	0.3	0	0.0
F0057	18	0.4	6	0.1	12	0.3	0	0.0
F0058	0	0.0	0	0.0	0	0.0	0	0.0
F0059	0	0.0	0	0.0	0	0.0	0	0.0
F0060	0	0.0	0	0.0	0	0.0	0	0.0
F0061	0	0.0	0	0.0	0	0.0	0	0.0
F0062	0	0.0	0	0.0	0	0.0	0	0.0
F0063	0	0.0	0	0.0	0	0.0	0	0.0
F0064	0	0.0	0	0.0	0	0.0	0	0.0
F0065	0	0.0	0	0.0	0	0.0	0	0.0
F0066	0	0.0	0	0.0	0	0.0	0	0.0
F0067	0	0.0	0	0.0	0	0.0	0	0.0
F0068	0	0.0	0	0.0	0	0.0	0	0.0
F0069	0	0.0	0	0.0	0	0.0	0	0.0
F0070	0	0.0	0	0.0	0	0.0	0	0.0
F0071	0	0.0	0	0.0	0	0.0	0	0.0
F0072	0	0.0	0	0.0	0	0.0	0	0.0
F0073	128	2.7	123	2.6	5	0.1	0	0.0
F0074	26	0.5	0	0.0	26	0.5	0	0.0
F0075	26	0.5	0	0.0	26	0.5	0	0.0
F0076	36	0.8	0	0.0	36	0.8	0	0.0
F0077	35	0.7	0	0.0	35	0.7	0	0.0
F0078	43	0.9	0	0.0	43	0.9	0	0.0
F0079	50	1.0	0	0.0	50	1.0	0	0.0
F0080	54	1.1	0	0.0	54	1.1	0	0.0
F0081	38	0.8	0	0.0	38	0.8	0	0.0
F0082	46	1.0	0	0.0	46	1.0	0	0.0
F0083	47	1.0	0	0.0	47	1.0	0	0.0
F0084	42	0.9	0	0.0	42	0.9	0	0.0
F0085	53	1.1	0	0.0	53	1.1	0	0.0
F0086	44	0.9	0	0.0	44	0.9	0	0.0
F0087	35	0.7	0	0.0	35	0.7	0	0.0
F0088	46	1.0	0	0.0	46	1.0	0	0.0
F0089	40	0.8	0	0.0	40	0.8	0	0.0
F0090	64	1.3	0	0.0	64	1.3	0	0.0
F0091	54	1.1	0	0.0	54	1.1	0	0.0

See notes at end of table.

Table H-2. Number of changes and percentage of records affected during stage 1–stage 3 imputation of the current teacher data file: 2004–05—Continued

Variable	Total		Stage 1		Stage 2		Stage 3	
	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected
F0092	132	2.8	0	0.0	132	2.8	0	0.0
F0093	92	1.9	0	0.0	92	1.9	0	0.0
F0094	72	1.5	0	0.0	72	1.5	0	0.0
F0095	50	1.0	0	0.0	50	1.0	0	0.0
F0096	43	0.9	0	0.0	43	0.9	0	0.0
F0097	50	1.0	0	0.0	50	1.0	0	0.0
F0098	67	1.4	0	0.0	67	1.4	0	0.0
F0099	54	1.1	0	0.0	54	1.1	0	0.0
F0100	74	1.5	0	0.0	74	1.5	0	0.0
F0101	76	1.6	0	0.0	76	1.6	0	0.0
F0102	70	1.5	0	0.0	70	1.5	0	0.0
F0103	64	1.3	0	0.0	64	1.3	0	0.0
F0104	60	1.3	0	0.0	60	1.3	0	0.0
F0105	53	1.1	0	0.0	53	1.1	0	0.0
F0106	61	1.3	0	0.0	61	1.3	0	0.0
F0107	53	1.1	0	0.0	53	1.1	0	0.0
F0108	50	1.0	0	0.0	50	1.0	0	0.0
F0109	70	1.5	0	0.0	70	1.5	0	0.0
F0110	51	1.1	0	0.0	51	1.1	0	0.0
F0111	48	1.0	0	0.0	48	1.0	0	0.0
F0112	56	1.2	0	0.0	56	1.2	0	0.0
F0113	62	1.3	0	0.0	62	1.3	0	0.0
F0114	66	1.4	0	0.0	66	1.4	0	0.0
F0115	58	1.2	0	0.0	58	1.2	0	0.0
F0116	79	1.7	0	0.0	79	1.7	0	0.0
F0117	49	1.0	0	0.0	49	1.0	0	0.0
F0118	59	1.2	0	0.0	59	1.2	0	0.0
F0119	56	1.2	0	0.0	56	1.2	0	0.0
F0120	67	1.4	0	0.0	67	1.4	0	0.0
F0121	63	1.3	0	0.0	63	1.3	0	0.0
F0122	58	1.2	0	0.0	58	1.2	0	0.0
F0123	58	1.2	0	0.0	58	1.2	0	0.0
F0124	58	1.2	0	0.0	58	1.2	0	0.0
F0125	55	1.2	0	0.0	55	1.2	0	0.0
F0126	55	1.2	0	0.0	55	1.2	0	0.0
F0127	58	1.2	0	0.0	58	1.2	0	0.0
F0128	760	15.9	0	0.0	717	15.0	43	0.9
F0129	303	6.3	0	0.0	287	6.0	16	0.3
F0130	727	15.2	0	0.0	716	15.0	11	0.2
F0131	30	0.6	5	0.1	25	0.5	0	0.0

See notes at end of table.

Table H-2. Number of changes and percentage of records affected during stage 1–stage 3 imputation of the current teacher data file: 2004–05—Continued

Variable	Total		Stage 1		Stage 2		Stage 3	
	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected
F0132	31	0.6	6	0.1	25	0.5	0	0.0
F0133	39	0.8	13	0.3	26	0.5	0	0.0
F0134	42	0.9	16	0.3	26	0.5	0	0.0
F0135	30	0.6	4	0.1	26	0.5	0	0.0
F0136	0	0.0	0	0.0	0	0.0	0	0.0
F0137	54	1.1	54	1.1	0	0.0	0	0.0
F0138	0	0.0	0	0.0	0	0.0	0	0.0
F0144	0	0.0	0	0.0	0	0.0	0	0.0
F0145	0	0.0	0	0.0	0	0.0	0	0.0
F0146	0	0.0	0	0.0	0	0.0	0	0.0
F0147	0	0.0	0	0.0	0	0.0	0	0.0
F0148	0	0.0	0	0.0	0	0.0	0	0.0
F0149	0	0.0	0	0.0	0	0.0	0	0.0
F0150	0	0.0	0	0.0	0	0.0	0	0.0
F0151	0	0.0	0	0.0	0	0.0	0	0.0
F0152	0	0.0	0	0.0	0	0.0	0	0.0
F0153	0	0.0	0	0.0	0	0.0	0	0.0
F0154	0	0.0	0	0.0	0	0.0	0	0.0
F0155	0	0.0	0	0.0	0	0.0	0	0.0
F0156	0	0.0	0	0.0	0	0.0	0	0.0
F0157	0	0.0	0	0.0	0	0.0	0	0.0
F0158	0	0.0	0	0.0	0	0.0	0	0.0
F0159	85	1.8	13	0.3	62	1.3	10	0.2
F0160	9	0.2	1	0.0	7	0.1	1	0.0
F0161	93	1.9	0	0.0	93	1.9	0	0.0
F0162	101	2.1	0	0.0	101	2.1	0	0.0
F0163	97	2.0	0	0.0	97	2.0	0	0.0
F0164	95	2.0	0	0.0	95	2.0	0	0.0
F0165	94	2.0	0	0.0	94	2.0	0	0.0
F0166	99	2.1	0	0.0	99	2.1	0	0.0
F0167	100	2.1	0	0.0	100	2.1	0	0.0
F0168	105	2.2	0	0.0	105	2.2	0	0.0
F0169	103	2.2	0	0.0	103	2.2	0	0.0
F0170	96	2.0	0	0.0	96	2.0	0	0.0
F0171	104	2.2	0	0.0	104	2.2	0	0.0
F0172	148	3.1	102	2.1	0	0.0	46	1.0
F0173	113	2.4	0	0.0	113	2.4	0	0.0
F0174	131	2.7	0	0.0	131	2.7	0	0.0
F0175	122	2.6	0	0.0	122	2.6	0	0.0
F0176	118	2.5	0	0.0	118	2.5	0	0.0

See notes at end of table.

Table H-2. Number of changes and percentage of records affected during stage 1–stage 3 imputation of the current teacher data file: 2004–05—Continued

Variable	Total		Stage 1		Stage 2		Stage 3	
	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected
F0177	119	2.5	0	0.0	119	2.5	0	0.0
F0178	136	2.8	0	0.0	136	2.8	0	0.0
F0179	129	2.7	0	0.0	129	2.7	0	0.0
F0180	125	2.6	0	0.0	125	2.6	0	0.0
F0181	80	1.7	80	1.7	0	0.0	0	0.0
F0182	182	3.8	168	3.5	0	0.0	14	0.3
F0183	175	3.7	0	0.0	175	3.7	0	0.0
F0184	170	3.6	0	0.0	170	3.6	0	0.0
F0185	173	3.6	0	0.0	173	3.6	0	0.0
F0186	186	3.9	0	0.0	186	3.9	0	0.0
F0187	174	3.6	0	0.0	174	3.6	0	0.0
F0188	88	1.8	0	0.0	88	1.8	0	0.0
F0189	93	1.9	0	0.0	93	1.9	0	0.0
F0190	108	2.3	0	0.0	108	2.3	0	0.0
F0191	92	1.9	0	0.0	92	1.9	0	0.0
F0192	98	2.1	0	0.0	98	2.1	0	0.0
F0193	99	2.1	0	0.0	99	2.1	0	0.0
F0194	102	2.1	0	0.0	102	2.1	0	0.0
F0195	100	2.1	0	0.0	100	2.1	0	0.0
F0196	105	2.2	0	0.0	105	2.2	0	0.0
F0197	104	2.2	0	0.0	104	2.2	0	0.0
F0198	103	2.2	0	0.0	103	2.2	0	0.0
F0199	103	2.2	0	0.0	103	2.2	0	0.0
F0200	102	2.1	0	0.0	102	2.1	0	0.0
F0201	98	2.1	0	0.0	98	2.1	0	0.0
F0202	99	2.1	0	0.0	99	2.1	0	0.0
F0203	98	2.1	0	0.0	98	2.1	0	0.0
F0204	92	1.9	0	0.0	92	1.9	0	0.0
F0205	3	0.1	0	0.0	3	0.1	0	0.0
F0206	3	0.1	0	0.0	3	0.1	0	0.0
F0207	95	2.0	0	0.0	95	2.0	0	0.0
F0208	28	0.6	0	0.0	28	0.6	0	0.0
F0209	51	1.1	51	1.1	0	0.0	0	0.0
F0210	22	0.5	0	0.0	22	0.5	0	0.0
F0211	41	0.9	0	0.0	41	0.9	0	0.0
F0212	47	1.0	0	0.0	47	1.0	0	0.0
F0213	42	0.9	0	0.0	42	0.9	0	0.0
F0214	55	1.2	32	0.7	23	0.5	0	0.0
F0215	68	1.4	0	0.0	68	1.4	0	0.0
F0216	115	2.4	0	0.0	115	2.4	0	0.0

See notes at end of table.

Table H-2. Number of changes and percentage of records affected during stage 1–stage 3 imputation of the current teacher data file: 2004–05—Continued

Variable	Total		Stage 1		Stage 2		Stage 3	
	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected	Number of changes	Percentage of records affected
F0217	97	2.0	12	0.3	85	1.8	0	0.0
F0218	57	1.2	0	0.0	57	1.2	0	0.0
F0219	157	3.3	64	1.3	93	1.9	0	0.0
F0220	36	0.8	0	0.0	36	0.8	0	0.0
F0221	158	3.3	60	1.3	98	2.1	0	0.0
F0222	73	1.5	0	0.0	73	1.5	0	0.0
F0223	310	6.5	0	0.0	310	6.5	0	0.0
F0224	103	2.2	57	1.2	46	1.0	0	0.0
F0225	128	2.7	0	0.0	128	2.7	0	0.0
F0226	111	2.3	23	0.5	88	1.8	0	0.0
F0227	35	0.7	0	0.0	35	0.7	0	0.0
F0228	88	1.8	3	0.1	85	1.8	0	0.0
F0229	91	1.9	0	0.0	91	1.9	0	0.0
F0230	25	0.5	0	0.0	25	0.5	0	0.0
F0231	247	5.2	21	0.4	226	4.7	0	0.0
F0232	127	2.7	0	0.0	106	2.2	21	0.4
F0233	1,848	38.7	664	13.9	1,172	24.5	12	0.3
F0234	20	0.4	0	0.0	20	0.4	0	0.0
F0235	498	10.4	0	0.0	498	10.4	0	0.0
F0236	48	1.0	0	0.0	48	1.0	0	0.0
F0237	290	6.1	0	0.0	290	6.1	0	0.0
F0238	0	0.0	0	0.0	0	0.0	0	0.0
F0269	0	0.0	0	0.0	0	0.0	0	0.0
F0270	0	0.0	0	0.0	0	0.0	0	0.0
F0271	0	0.0	0	0.0	0	0.0	0	0.0
F0272	0	0.0	0	0.0	0	0.0	0	0.0
F0278	0	0.0	0	0.0	0	0.0	0	0.0
F0279	0	0.0	0	0.0	0	0.0	0	0.0

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current Teacher Restricted Use Data File," 2004–05.

Appendix I. Weighting Adjustment Cells

A detailed listing of the weighting classes, or cells, used in the Teacher Follow-up Survey (TFS) is contained in this appendix. Refer to “Chapter 8. Weighting and Variance Estimation” for a more general description of the weighting procedure.

TFS Nonresponse Adjustment Cells

The noninterview tables used in the weighting have the following categories in common: sex (i.e., male and female), education level (i.e., bachelor’s degree or less and master’s degree or more), and age (categories vary by stratum). Public charter school teachers were combined with traditional public school teachers for the purpose of weighting. Note that the characteristics (sex, education level, age, sector, etc.) used to define the weighting classes are based on data reported in the Schools and Staffing Survey (SASS).

<i>New Public School Leavers:</i>	<i>Sex by Education Level by Age Category</i>
Age:	Less than 24, 24–25, 26–27, 28–30, 31–34, 35–39, 40–46, 47–53, and 54 or older
<i>Experienced Public School Leavers:</i>	<i>Sex by Education Level by Age Category</i>
Age:	Less than 26, 26–28, 29–30, 31–32, 33–34, 35–37, 38–41, 42–46, 47–51, 52–54, 55–56, 57–58, 59–61, and 62 or older
<i>New Public School Movers:</i>	<i>Sex by Education Level by Age Category</i>
Age:	Less than 24, 24–25, 26–27, 28–30, 31–34, 35–41, and 42 or older
<i>Experienced Public School Movers:</i>	<i>Sex by Education Level by Age Category</i>
Age:	Less than 29, 29–31, 32–34, 35–38, 39–42, 43–46, 47–50, 51–53, and 54 or older
<i>New Public School Stayers:</i>	<i>Sex by Education Level by Age Category</i>
Age:	Less than 24, 24–25, 26–27, 28–30, 31–34, 35–39, 40–47, and 48 or older
<i>Experienced Public School Stayers:</i>	<i>Sex by Education Level by Age Category</i>
Age:	Less than 30, 30–32, 33–35, 36–39, 40–42, 43–45, 46–48, 49–51, 52–53, 54–56, and 57 or older
<i>New Private School Leavers:</i>	<i>Sex by Education Level by Age Category</i>
Age:	Less than 25, 25–26, 27–29, 30–35, 36–42, and 43 or older

Experienced Private School Leavers:	Sex by Education Level by Age Category
Age:	Less than 32, 33–37, 38–43, 44–50, 51–57, and 58 or older
New Private School Movers:	Sex by Education Level by Age Category
Age:	Less than 25, 25–26, 27–37, and 38 or older
Experienced Private School Movers:	Sex by Education Level by Age Category
Age:	Less than 30, 30–34, 35–41, 42–50, and 51 or older
New Private School Stayers:	Sex by Education Level by Age Category
Age:	Less than 25, 25–26, 27–29, 30–34, 35–41, 42–47, and 48 or older
Experienced Private School Stayers:	Sex by Education Level by Age Category
Age:	Less than 31, 31–35, 36–40, 41–45, 46–49, 50–52, 53–56, 57–59, and 60 or older

TFS First-Stage Adjustment Cells

The first-stage tables used in the weighting have the following categories in common: sex (i.e., male and female), race/ethnicity (i.e., minority, nonminority), teaching assignment (i.e., special education, general elementary, secondary math, secondary science, secondary English, secondary social science, secondary vocational/technical, and secondary other) and age (categories vary). Public charter school teachers were combined with traditional public school teachers for the purpose of weighting. Note that the characteristics (sex, race/ethnicity, teaching assignment, age, sector, etc.) used to define the weighting classes are based on data reported in SASS.

Public School Teachers:	Sex by Race/Ethnicity by Teaching Assignment by Age
Male by Minority:	Less than 33, 33–43, and 44 or older
Male by Nonminority:	Less than 30, 30–36, 37–46, 47–52, 53–57, and 58 or older
Female by Minority:	Less than 30, 30–34, 35–43, 44–54, and 55 or older
Female by Nonminority:	Less than 26, 26–27, 28–30, 31–34, 35–38, 39–43, 44–47, 48–51, 52–55, 56–58, and 59 or older
Private School Teachers:	Sex by Race/Ethnicity by Teaching Assignment by Age
Male by Minority:	No age categories used
Male by Nonminority:	Less than 28, 28–34, 35–42, 43–51, and 52 or older
Female by Minority:	Less than 32, 32–42, 43–55, and 56 or older
Female by Nonminority:	Less than 25, 25–27, 28–32, 33–38, 39–46, 47–51, and 52 or older

Appendix J. Frame and Created Variables

Variables were classified as frame variables if they were drawn from or based on the Teacher Follow-up Survey (TFS) sampling frame. These variables may be based on information from the Schools and Staffing Survey (SASS), the Common Core of Data (CCD), or the Private School Universe Survey (PSS). Frame variables may or may not have been used for sampling. Selected variables from these sources were included on the restricted-use data files if they provided potentially valuable information to the user that was not available on the survey.

Created variables are based on survey variables, frame variables, other created variables, or a combination of these. These variables are frequently used in National Center for Education Statistics (NCES) publications and have been added to the data files to facilitate data analysis.

The frame and created variables included on the 2004–05 TFS data files are listed below along with a brief description. The SAS code used to produce the created variables is also detailed.

Variable name	Variable type	Description and specifications
A03C2_TF	Created	Variable showing whether TFS teacher's general field of main teaching assignment changed between 2003–04 SASS and 2004–05 TFS. Categories include: 1 = General field of main teaching assignment in 2003–04 same as in 2004–05; 2 = General field of main teaching assignment changed between 2003–04 and 2004–05. Coded as follows: if ASSIGN03 = ASN03_TF then A03C2_TF = 1; else A03C2_TF = 2;
A03CH_TF	Created	Variable showing whether TFS teacher's detailed main teaching assignment changed between 2003–04 SASS and 2004–05 TFS. Categories include: 1 = Detailed main teaching assignment in 2003–04 same as in 2004–05; 2 = Detailed main teaching assignment changed between 2003–04 and 2004–05. Coded as follows: if t0069 in (101, 102) or t0075 in (101, 102) then mainasn = 1; if t0069 = 110 or t0075 = 110 then mainasn = 2; if t0069 = 141 or t0075 = 141 then mainasn = 3; if t0069 = 143 or t0075 = 143 then mainasn = 4; if t0069 = 144 or t0075 = 144 then mainasn = 5; if t0069 = 145 or t0075 = 145 then mainasn = 6; if t0069 = 151 or t0075 = 151 then mainasn = 7; if t0069 = 152 or t0075 = 152 then mainasn = 8; if t0069 = 153 or t0075 = 153 then mainasn = 9; if t0069 = 154 or t0075 = 154 then mainasn = 10; if t0069 = 155 or t0075 = 155 then mainasn = 11; if t0069 = 158 or t0075 = 158 then mainasn = 12; if t0069 = 159 or t0075 = 159 then mainasn = 13; if t0069 in (160, 161, 162) or t0075 in (160, 161, 162) then mainasn = 14; if t0069 = 171 or t0075 = 171 then mainasn = 15; if t0069 = 172 or t0075 = 172 then mainasn = 16; if t0069 = 173 or t0075 = 173 then mainasn = 17; if t0069 = 174 or t0075 = 174 then mainasn = 18; if t0069 = 175 or t0075 = 175 then mainasn = 19; if t0069 = 181 or t0075 = 181 then mainasn = 20; if t0069 = 182 or t0075 = 182 then mainasn = 21; if t0069 = 191 or t0075 = 191 then mainasn = 22; if t0069 = 192 or t0075 = 192 then mainasn = 23; if t0069 = 193 or t0075 = 193 then mainasn = 24; if t0069 = 194 or t0075 = 194 then mainasn = 25; if t0069 = 195 or t0075 = 195 then mainasn = 26; if t0069 = 196 or t0075 = 196 then mainasn = 27; if t0069 = 197 or t0075 = 197 then mainasn = 28; if t0069 = 198 or t0075 = 198 then mainasn = 29; if t0069 = 199 or t0075 = 199 then mainasn = 30; if t0069 = 200 or t0075 = 200 then mainasn = 31; if t0069 = 201 or t0075 = 201 then mainasn = 32; if t0069 = 210 or t0075 = 210 then mainasn = 33; if t0069 = 211 or t0075 = 211 then mainasn = 34; if t0069 = 212 or t0075 = 212 then mainasn = 35; if t0069 = 213 or t0075 = 213 then mainasn = 36; if t0069 = 215 or t0075 = 215 then mainasn = 37; if t0069 = 216 or t0075 = 216 then mainasn = 38; if t0069 = 217 or t0075 = 217 then mainasn = 39; if t0069 = 220 or t0075 = 220 then

Variable name	Variable type	Description and specifications
		<p>mainasn = 40; if t0069 = 221 or t0075 = 221 then mainasn = 41; if t0069 = 225 or t0075 = 225 then mainasn = 42; if t0069 = 226 or t0075 = 226 then mainasn = 43; if t0069 = 227 or t0075 = 227 then mainasn = 44; if t0069 = 228 or t0075 = 228 then mainasn = 45; if t0069 = 231 or t0075 = 231 then mainasn = 46; if t0069 = 233 or t0075 = 233 then mainasn = 47; if t0069 = 234 or t0075 = 234 then mainasn = 48; if t0069 = 241 or t0075 = 241 then mainasn = 49; if t0069 = 242 or t0075 = 242 then mainasn = 50; if t0069 = 243 or t0075 = 243 then mainasn = 51; if t0069 = 244 or t0075 = 244 then mainasn = 52; if t0069 = 245 or t0075 = 245 then mainasn = 53; if t0069 = 246 or t0075 = 246 then mainasn = 54; if t0069 = 247 or t0075 = 247 then mainasn = 55; if t0069 = 248 or t0075 = 248 then mainasn = 56; if t0069 = 249 or t0075 = 249 then mainasn = 57; if t0069 = 250 or t0075 = 250 then mainasn = 58; if t0069 = 251 or t0075 = 251 then mainasn = 59; if t0069 = 252 or t0075 = 252 then mainasn = 60; if t0069 = 253 or t0075 = 253 then mainasn = 61; if t0069 = 254 or t0075 = 254 then mainasn = 62; if t0069 = 255 or t0075 = 255 then mainasn = 63; if t0069 = 256 or t0075 = 256 then mainasn = 64; if t0069 = 262 or t0075 = 262 then mainasn = 65; if t0069 = 264 or t0075 = 264 then mainasn = 66; if t0069 = 265 or t0075 = 265 then mainasn = 67; if t0069 = 266 or t0075 = 266 then mainasn = 68; if t0069 = 267 or t0075 = 267 then mainasn = 69; if t0069 = 268 or t0075 = 268 then mainasn = 70; if f0056 in (101, 102) then mainasnt = 1; if f0056 = 110 then mainasnt = 2; if f0056 = 141 then mainasnt = 3; if f0056 = 143 then mainasnt = 4; if f0056 = 144 then mainasnt = 5; if f0056 = 145 then mainasnt = 6; if f0056 = 151 then mainasnt = 7; if f0056 = 152 then mainasnt = 8; if f0056 = 153 then mainasnt = 9; if f0056 = 154 then mainasnt = 10; if f0056 = 155 then mainasnt = 11; if f0056 = 158 then mainasnt = 12; if f0056 = 159 then mainasnt = 13; if f0056 in (160, 161, 162) then mainasnt = 14; if f0056 = 171 then mainasnt = 15; if f0056 = 172 then mainasnt = 16; if f0056 = 173 then mainasnt = 17; if f0056 = 174 then mainasnt = 18; if f0056 = 175 then mainasnt = 19; if f0056 = 181 then mainasnt = 20; if f0056 = 182 then mainasnt = 21; if f0056 = 191 then mainasnt = 22; if f0056 = 192 then mainasnt = 23; if f0056 = 193 then mainasnt = 24; if f0056 = 194 then mainasnt = 25; if f0056 = 195 then mainasnt = 26; if f0056 = 196 then mainasnt = 27; if f0056 = 197 then mainasnt = 28; if f0056 = 198 then mainasnt = 29; if f0056 = 199 then mainasnt = 30; if f0056 = 200 then mainasnt = 31; if f0056 = 201 then mainasnt = 32; if f0056 = 210 then mainasnt = 33; if f0056 = 211 then mainasnt = 34; if f0056 = 212 then mainasnt = 35; if f0056 = 213 then mainasnt = 36; if f0056 = 215 then mainasnt = 37; if f0056 = 216 then mainasnt = 38; if f0056 = 217 then mainasnt = 39; if f0056 = 220 then mainasnt = 40; if f0056 = 221 then mainasnt = 41; if f0056 = 225 then mainasnt = 42; if f0056 = 226 then mainasnt = 43; if f0056 = 227 then mainasnt = 44; if f0056 = 228 then mainasnt = 45; if f0056 = 231 then mainasnt = 46; if f0056 = 233 then mainasnt = 47; if f0056 = 234 then mainasnt = 48; if f0056 = 241 then mainasnt = 49; if f0056 = 242 then mainasnt = 50; if f0056 = 243 then mainasnt = 51; if f0056 = 244 then mainasnt = 52; if f0056 = 245 then mainasnt = 53; if f0056 = 246 then mainasnt = 54; if f0056 = 247 then mainasnt = 55; if f0056 = 248 then mainasnt = 56; if f0056 = 249 then mainasnt = 57; if f0056 = 250 then mainasnt = 58; if f0056 = 251 then mainasnt = 59; if f0056 = 252 then mainasnt = 60; if f0056 = 253 then mainasnt = 61; if f0056 = 254 then mainasnt = 62; if f0056 = 255 then mainasnt = 63; if f0056 = 256 then mainasnt = 64; if f0056 = 262 then mainasnt = 65; if f0056 = 264 then mainasnt = 66; if f0056 = 265 then mainasnt = 67; if f0056 = 266 then mainasnt = 68; if f0056 = 267 then mainasnt = 69; if f0056 = 268 then mainasnt = 70;</p> <p>if mainasn = mainasnt then A03CH_TF = 1; else A03CH_TF = 2;</p>
AGE_T	Created	Teacher's age at the time of SASS. Calculated as follows: age_t = sum (2003, -t0416);

Variable name	Variable type	Description and specifications
AGE_TF	Created	Teacher's age during TFS. Calculated by adding 1 year to age as reported in SASS (AGE_T). Calculated as follows: AGE_TF = sum (AGE_T, 1);
AIFLAG	Created	Flag identifying Bureau of Indian Affairs (BIA) funded schools in the SASS sample and proportion of American Indian students enrolled in non-BIA schools. Categories include: 1 = BIA-funded school; 2 = Non-BIA school, 20 percent or more American Indian enrollment; 3 = Non-BIA school, less than 20 percent American Indian enrollment; -8 = Valid skip, respondent taught in a private school in the 2003–04 SASS. Coded as follows: If BIAFLAG = 1 then AIFLAG = 1; if BIAFLAG = 2 and S0421/ENRK12UG ge .2 then AIFLAG = 2; if BIAFLAG = 2 and S0421/ENRK12UG lt .2 then AIFLAG = 3; if sector = 2 then do; if AIFLAG = . then AIFLAG = -8; end;
ASGN03_S	Created	2003–04 SASS main teaching assignment field (as reported in TFS First Look). Categories include: 1 = Early Childhood/General Elementary; 2 = Special Education; 3 = Arts/Music; 4 = English/Language Arts; 5 = Mathematics; 6 = Natural Sciences; 7 = Social Sciences; 8 = Other. “Other” includes all vocational/technical teachers, all ESL/Bilingual teachers, teachers of foreign languages, teachers of health or physical education, computer science teachers, and all teachers under the miscellaneous and other categories. Coded as follows: if t0069 in (101, 102) or t0075 in (101, 102) then ASGN03_S = 1; if t0069 = 110 or t0075 = 110 then ASGN03_S = 2; if t0069 in (141, 143, 144, 145) or t0075 in (141, 143, 144, 145) then ASGN03_S = 3; if t0069 in (151, 152, 153, 154, 155, 158, 159) or t0075 in (151, 152, 153, 154, 155, 158, 159) then ASGN03_S = 4; if t0069 in (191, 192, 193, 194, 195, 196, 198, 199, 200, 201) or t0075 in (191, 192, 193, 194, 195, 196, 198, 199, 200, 201) then ASGN03_S = 5; t0069 in (210, 211, 212, 213, 215, 216, 217) or t0075 in (210, 211, 212, 213, 215, 216, 217) then ASGN03_S = 6; t0069 in (220, 221, 225, 226, 227, 228, 233, 234) or t0075 in (220, 221, 225, 226, 227, 228, 233, 234) then ASGN03_S = 7; else ASGN03_S = 8;

Variable name	Variable type	Description and specifications
ASN03_TF	Created	<p>General field of main teaching assignment in TFS. Categories include:</p> <p>1 = Early Childhood/General Elementary; 2 = Special Education; 3 = Arts and Music; 4 = English/Language Arts; 5 = ESL/Bilingual Education; 6 = Foreign Language; 7 = Health/Physical Education; 8 = Mathematics; 9 = Natural Sciences; 10 = Social Sciences; 11 = Vocational/Technical Education; 12 = Other.</p> <p>Coded as follows: if f0056 in (101,102) then ASN03_TF = 1; if f0056 = 110 then ASN03_TF = 2; if f0056 in (141, 143, 144, 145) then ASN03_TF = 3; if f0056 in (151, 152, 153, 154, 155, 158, 159) then ASN03_TF = 4; if f0056 in (160, 161, 162) then ASN03_TF = 5; if 171 le f0056 le 175 then ASN03_TF = 6; if f0056 in (181, 182) then ASN03_TF = 7; if f0056 in (191, 192, 193, 194, 195, 196, 198, 199, 200, 201) then ASN03_TF = 8; if f0056 in (210, 211, 212, 213, 215, 216, 217) then ASN03_TF = 9; if f0056 in (220, 221, 225, 226, 227, 228, 231, 233, 234) then ASN03_TF = 10; if 241 le f0056 le 256 then ASN03_TF = 11; if f0056 in (197, 262, 264, 265, 266, 267, 268) then ASN03_TF = 12;</p>
ASSIGN03	Created	<p>General field of main teaching assignment at time of SASS. Categories include:</p> <p>1 = Early Childhood/General Elementary; 2 = Special Education; 3 = Arts/Music; 4 = English/Language Arts; 5 = ESL/Bilingual Education; 6 = Foreign Languages; 7 = Health/Physical Education; 8 = Mathematics; 9 = Natural Science; 10 = Social Sciences; 11 = Vocational/Technical Education; 12 = All Others.</p> <p>Coded as follows: if t0069 in (101,102) then ASSIGN03 = 1; if t0069 = 110 then ASSIGN03 = 2; if t0069 in (141, 143, 144, 145) then ASSIGN03 = 3; if t0069 in (151, 152, 153, 154, 155, 158, 159) then ASSIGN03 = 4; if t0069 in (160, 161, 162) then ASSIGN03 = 5; if 171 le t0069 le 175 then ASSIGN03 = 6; if t0069 in (181, 182) then ASSIGN03 = 7; if t0069 in (191, 192, 193, 194, 195, 196, 198, 199, 200, 201) then ASSIGN03 = 8; if t0069 in (210, 211, 212, 213, 215, 216, 217) then ASSIGN03 = 9; if t0069 in (220, 221, 225, 226, 227, 228, 231, 233, 234) then ASSIGN03 = 10; if 241 le t0069 le 256 then ASSIGN03 = 11; if t0069 in (197, 262, 264, 265, 266, 267, 268) then ASSIGN03 = 12;</p>

Variable name	Variable type	Description and specifications
CHARFLAG	Created	<p>Indicates whether or not the SASS school was a public charter school; a public charter school provides free elementary and/or secondary education to eligible students under a specific charter granted by the state legislature or other appropriate authority. Copied from S0661 on the public school file. Categories include:</p> <p>1 = School is a public charter school; 2 = School is not a public charter school; -8 = Valid skip, respondent taught in a private school in the 2003–04 SASS. Coded for TFS as follows: if sector = 2 then do; if CHARFLAG = . then CHARFLAG = -8; end;</p>
CMODE_TF	Frame	<p>TFS mode of data collection. Categories include:</p> <p>1 = Mail option only; 2 = Internet option without advance notice of mail option; 3 = Internet option with advance notice of mail option. Coded as follows: if TPNL in (1, 2) then CMODE_TF = 1; else if TPNL in (3, 4) then CMODE_TF = 2; else if TPNL in (5, 6) then CMODE_TF = 3;</p>
CNTLNUMD	Frame	<p>SASS district control number. Digits 1–2: State FIPS code. Digits 3–5: District number (000 for private schools; 101–899—All public schools except public schools with no districts, state run schools, one-school districts, and some charter schools; 901–999—Public schools with no districts, state run schools, one-school districts, and some charter schools). Digit 6: Check digit—Computed from other parts of control number. if sector = 2 then do; CNTLNUMD = -8 (Valid skip, respondent taught in a private school in the 2003–04 SASS); end;</p>
CNTLNUMS	Frame	<p>SASS school control number. Use this number to merge school, principal, teacher, and library records.</p> <p>SASS public schools: Digits 1–2: State FIPS code. Digits 3–5: District number (101–899—All public schools except public schools with no districts, state run schools, one school districts, and some charter schools, 901–999—Public schools with no districts, state run schools, one-school districts, and some charter schools). Digit 6: Type of school (1 = Regular public school; 2 = DOD school; 3 = BIA school; 7 = One-school districts; 8 = Charter school operated by regular District; 9 = Charter school operated by an entity other than a school district; 0 = Independent charter school). Digits 7–9: School number (101–999—Schools are numbered sequentially starting with ‘101’ within each state and each District). Digit 10: Split school indicator (‘0’ for all schools). Digit 11: Questionnaire identifier (3 = school). Digit 12: Check digit—Computed from other parts of control number.</p> <p>SASS private schools: Digit 1–2: State FIPS code. Digit 3–5: District number—‘000’ for all private schools. Digit 6: Type of school (4 = Catholic list frame private school; 5 = Non-Catholic list frame private school; 6 = Area frame private school). Digit 7–9: School number (101–999—Schools are numbered sequentially starting with ‘101’ within each state and school type). Digit 10: Split school indicator (‘0’ for all schools). Digit 11: Questionnaire identifier (3 = school). Digit 12: Check digit—Computed from other parts of control number.</p>

Variable name	Variable type	Description and specifications
CNTLNUMT	Frame	<p>Teacher control number used for merging TFS and SASS teacher records.</p> <p>Public school teacher: Digits 1–2: State FIPS code. Digits 3–5: District number (101–899—All public schools except public schools with no districts, state run schools, one-school districts, and some charter schools, 901–999—Public schools with no districts, state run schools, one school districts, and some charter schools). Digit 6: (1 = Regular public school; 2 = DoD school; 3 = BIA school; 7 = One-school districts; 8 = Charter school operated by a regular District; 9 = Charter school operated by an entity other than a school district; 0 = Independent charter school). Digits 7–9: School number (101–999—Schools are numbered sequentially starting with ‘101’ within each state and each District). Digit 10: Split school indicator (‘0’ for all schools). Digit 11–13: Teacher number (Teachers are numbered sequentially from ‘101’ to ‘120’ within each school). Digit 14: Check digit—Computed from other parts of control number.</p> <p>Private school teacher: Digit 1–2: State FIPS code. Digit 3–5: District number—‘000’ for all private schools. Digit 6: Type of school (4 = Catholic list frame private school; 5 = Non-Catholic list frame private school; 6 = Area frame private school). Digit 7–9: School number (101–999—Schools are numbered sequentially starting with ‘101’ within each type of school and each state). Digit 10: Split school indicator (‘0’ for all schools). Digit 11–13: Teacher number (Teachers are numbered sequentially from ‘101’ to ‘120’ within each school). Digit 14: Check digit—Computed from other parts of control number.</p>
EARNSTF	Created	<p>TFS teacher’s total yearly earnings from all school-related jobs. Calculated as follows: ARRAY d(218:227) F0218–F0227; do i = 218 to 227; if d(i) = -8 then d(i) = .; end;</p> <p>EARNSTF2 = sum (F0218, F0220, F0223, F0225, F0227); ARRAY d(218: 227) F0218–F0227; do i = 218 to 227; if d(i) = . then d(i) = -8; end;</p>
EARN12TF	Created	<p>TFS teacher’s total earnings for 12 months from end of 2003–04 school year to end of 2004–05 school year. Includes base salary for 2004–05 school year, additional compensation from the school district, earned income from other school sources, and any pay for teaching summer school, working in a nonteaching job in a school, or working at any nonschool job. Calculated as follows: ARRAY d(218:229) F0218–F0229; do i = 218 to 229; if d(i) = -8 then d(i) = .; end; EARN12TF2 = sum (F0218, F0220, F0222, F0223, F0225, F0227, F0229); ARRAY d(218:229) F0218–F0229; do i = 218 to 229; if d(i) = . then d(i) = -8; end;</p>
ENRK12UG	Created	<p>Total K–12 and ungraded student enrollment in the SASS school. Copied from S0414 from SASS public school file and from S0422 from SASS private school file.</p>
ENRLEA	Created	<p>Total K–12 and ungraded student enrollment in the SASS district. Copied from D0051 on the SASS district file.</p> <p>Coded as follows: ENRLEA= D0051; if sector = 2 then do; if ENRLEA = . then ENRLEA = -8 (Valid skip, respondent did not teach in a school associated with a district in the 2003–04 SASS); end;</p>
FTPT_S	Created	<p>Two-level teaching status variable that shows whether respondent taught full-time or part-time at time of SASS. Categories include:</p> <p>1 = Full-time;</p> <p>2 = Part-time.</p> <p>Coded as follows: if t0026 = 1 or t0029 = 1 then FTPT_S = 1; else FTPT_S = 2;</p>

Variable name	Variable type	Description and specifications
GENDER_S	Created	Respondent's gender. Categories include: 1 = Male, 2 = Female. Coded as follows: if t0408 = 1 then GENDER_S = 1; if t0408 = 2 then GENDER_S = 2;
HIDEGR_S	Created	Highest degree held by the teacher at the time of the 2003–04 SASS. Categories include: 1 = Assoc. degree or no college degree; 2 = Bachelor's degree; 3 = Master's degree; 4 = Education Specialist; 5 = Doctorate or Professional degree. Coded as follows: if t0142 ne -8 then HIDEGR_S = 5; else if t0138 ne -8 or t0140 ne -8 then HIDEGR_S = 4; else if t0123 = 1 then HIDEGR_S = 3; else if t0116 = 1 then HIDEGR_S = 2; else HIDEGR_S = 1;
IEP_T	Created	Percentage of SASS teacher's students taught in most recent full week who had an Individual Education Plan (IEP), for teachers with self-contained or departmentalized classes. Calculated as follows: if t0066 = 1 then iep_t = round $((100*(t0279/pupils_d)),.0001)$; if t0066 = 3 then iep_t = round $((100*(t0279/pupils_s)),.0001)$; if iep_t gt 100 then iep_t = 100; if t0066 not in (1,3) then iep_t = -8;
JOBDES_S	Created	Type of additional jobs that respondents held outside of their SASS school system. Categories include: 1 = Teaching or tutoring; 2 = Nonteaching; 3 = Other. Copied from T0406.
LEP_T	Created	Percentage of SASS teacher's students taught by teachers of self-contained or departmentalized classes who have limited-English proficiency. Calculated as follows: if t0066 = 1 then lep_t = round $((100*(t0284/pupils_d)),.0001)$; if t0066 = 3 then lep_t = round $((100*(t0284/pupils_s)),.0001)$; if lep_t gt 100 then lep_t = 100; if t0066 not in (1, 3) then lep_t = -8;
MINENR	Created	Percentage of students in SASS school who are of a racial/ethnic minority. Calculated as follows: MINENR = round $((NMINST_S/ENRK12UG)*100)$, .0001);
MINTCH	Created	Percentage of teachers at the SASS school who are of a racial/ethnic minority. Calculated as follows: MINTCH = round $((sum(S0515, S0517, S0518, S0519)/S0520)*100)$, .0001);

Variable name	Variable type	Description and specifications
MOVER_TF	Created	<p>Ten-level variable showing whether teacher moved from the base year school, and if so, what type of move (i.e., across districts, states, and/or sectors). Categories include:</p> <p>1 = Teacher in same school where he/she was during SASS; 2 = Moved from one public school to another in the same district; 3 = Moved from one public school district to another, same state; 4 = Moved from one public school district to another, different state; 5 = Moved from a private school to a public school, same state; 6 = Moved from a private school to a public school, different state; 7 = Moved from one private school to another, same state; 8 = Moved from one private school to another, different state; 9 = Moved from a public school to a private school, same state; 10 = Moved from a public school to private school, different state.</p> <p>Coded as follows: if F0136 = 1 then MOVER_TF = 1; if F0159 = 1 then MOVER_TF = 2 ; if F0159 = 2 and F0137 = 1 then MOVER_TF = 3; if F0159 = 2 and F0137 = 2 then MOVER_TF = 4; if F0159 = 3 and F0137 = 1 then MOVER_TF = 5; if F0159 = 3 and F0137 = 2 then MOVER_TF = 6; if F0159 = 4 and F0137 = 1 then MOVER_TF = 7; if F0159 = 4 and F0137 = 2 then MOVER_TF = 8; if F0159 = 5 and F0137 = 1 then MOVER_TF = 9; if F0159 = 5 and F0137 = 2 then MOVER_TF = 10;</p>
NEWTCH	Created	<p>Identifies teachers with 3 or fewer years of teaching experience during the SASS base year. Calculated from the teacher’s total full-time and part-time teaching experience (TOTEXPER) as reported in SASS. Categories include:</p> <p>1 = Teacher has taught 3 or fewer years, 2 = Teacher has taught more than 3 years.</p> <p>Coded as follows: if totexper <= 3 then newtch = 1; else newtch = 2;</p>
NMINST_S	Created	<p>Number of students in the SASS school who are of a racial/ethnic minority. Calculated as follows: NMINST_S = sum(S0417, S0419, S0420, S0421);</p>
NSLAPP_S	Created	<p>Of SASS schools that participate in the National School Lunch Program, the percentage of their K–12 enrollment that was approved for free or reduced-price lunches. Calculated as follows: if S0632 = 2 then nslapp_s = -8 (Valid skip, School does not participate in NSLP); else nslapp_s = round (((S0634/ENRK12UG)*100), .0001); if nslapp_s > 100 then nslapp_s = 100;</p>
OCODE_TF	Created	<p>2002 NAICS Occupation Classification. Origin: F5555 on the Former Teacher Questionnaire. For details on the occupation descriptions and groupings see Appendix B: Occupation Classification at http://www.census.gov/apsd/techdoc/cps/cpsmar05.pdf or see the ‘Census Occupation Codes’ table under supplemental materials in the restricted-use 2003–04 SASS and 2004–05 TFS Electronic Codebook (ECB).</p>
PGMTYPE	Created	<p>Program type of SASS school. Categories include:</p> <p>1 = Regular; 2 = Montessori; 3 = Special Program Emphasis; 4 = Special Education; 5 = Vocational Education; 6 = Alternative; 7 = Early Childhood Program/Daycare Center.</p> <p>Copied from variable S0441 on SASS public and private school files.</p>

Variable name	Variable type	Description and specifications
PLANS_S	Created	SASS teacher's plans on remaining in the teaching profession. Categories include: 1=As long as I am able; 2=Until I am eligible for retirement; 3=Will probably continue unless something better comes along; 4=Definitely plan to leave teaching as soon as I can; 5=Undecided at this time. Copied from T0383.
RACETH_T	Created	Teacher's race/ethnicity. Coded as follows: Array Races (5) T0414 T0413 T0412 T0411 T0410; Racenum = 0; Do i = 1 to 5; if Races(i) = 1 then Racenum = Racenum + 10**(i-1); End; if T0409 = 1 and Racenum = 1 then RACETH_T = 1; /* Hispanic, American Indian */ if T0409 = 1 and Racenum = 10 then RACETH_T = 2; /* Hispanic, Hawaiian Native */ if T0409 = 1 and Racenum = 11 then RACETH_T = 3; /* Hispanic, Hawaiian Native, American Indian */ if T0409 = 1 and Racenum = 100 then RACETH_T = 4; /* Hispanic, Asian */ if T0409 = 1 and Racenum = 101 then RACETH_T = 5; /* Hispanic, Asian, American Indian */ if T0409 = 1 and Racenum = 110 then RACETH_T = 6; /* Hispanic, Asian, Hawaiian Native */ if T0409 = 1 and Racenum = 111 then RACETH_T = 7; /* Hispanic, Asian, Hawaiian Native, American Indian */ if T0409 = 1 and Racenum = 1000 then RACETH_T = 8; /* Hispanic, Black */ if T0409 = 1 and Racenum = 1001 then RACETH_T = 9; /* Hispanic, Black, American Indian */ if T0409 = 1 and Racenum = 1010 then RACETH_T = 10; /* Hispanic, Black, Hawaiian Native */ if T0409 = 1 and Racenum = 1011 then RACETH_T = 11; /* Hispanic, Black, Hawaiian Native, American Indian */ if T0409 = 1 and Racenum = 1100 then RACETH_T = 12; /* Hispanic, Black, Asian */ if T0409 = 1 and Racenum = 1101 then RACETH_T = 13; /* Hispanic, Black, Asian, American Indian */ if T0409 = 1 and Racenum = 1110 then RACETH_T = 14; /* Hispanic, Black, Asian, Hawaiian Native */ if T0409 = 1 and Racenum = 1111 then RACETH_T = 15; /* Hispanic, Black, Asian, Hawaiian Native, American Indian */ if T0409 = 1 and Racenum = 10000 then RACETH_T = 16; /* Hispanic, White */ if T0409 = 1 and Racenum = 10001 then RACETH_T = 17; /* Hispanic, White, American Indian */ if T0409 = 1 and Racenum = 10010 then RACETH_T = 18; /* Hispanic, White, Hawaiian Native */ if T0409 = 1 and Racenum = 10011 then RACETH_T = 19; /* Hispanic, White, Hawaiian Native, American Indian */ if T0409 = 1 and Racenum = 10100 then RACETH_T = 20; /* Hispanic, White, Asian */ if T0409 = 1 and Racenum = 10101 then RACETH_T = 21; /* Hispanic, White, Asian, American Indian */ if T0409 = 1 and Racenum = 10110 then RACETH_T = 22; /* Hispanic, White, Asian, Hawaiian Native */ if T0409 = 1 and Racenum = 10111 then RACETH_T = 23; /* Hispanic, White, Asian, Hawaiian Native, American Indian */ if T0409 = 1 and Racenum = 11000 then RACETH_T = 24; /* Hispanic, White,

Variable name	Variable type	Description and specifications
		Black */
		if T0409 = 1 and Racenum = 11001 then RACETH_T = 25; /* Hispanic, White, Black, American Indian */
		if T0409 = 1 and Racenum = 11010 then RACETH_T = 26; /* Hispanic, White, Black, Hawaiian Native */
		if T0409 = 1 and Racenum = 11011 then RACETH_T = 27; /* Hispanic, White, Black, Hawaiian Native, American Indian */
		if T0409 = 1 and Racenum = 11100 then RACETH_T = 28; /* Hispanic, White, Black, Asian */
		if T0409 = 1 and Racenum = 11101 then RACETH_T = 29; /* Hispanic, White, Black, Asian, American Indian */
		if T0409 = 1 and Racenum = 11110 then RACETH_T = 30; /* Hispanic, White, Black, Asian, Hawaiian Native */
		if T0409 = 1 and Racenum = 11111 then RACETH_T = 31; /* Hispanic, White, Black, Asian, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 1 then RACETH_T = 32; /* non-Hispanic, American Indian */
		if T0409 = 2 and Racenum = 10 then RACETH_T = 33; /* non-Hispanic, Hawaiian Native */
		if T0409 = 2 and Racenum = 11 then RACETH_T = 34; /* non-Hispanic, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 100 then RACETH_T = 35; /* non-Hispanic, Asian */
		if T0409 = 2 and Racenum = 101 then RACETH_T = 36; /* non-Hispanic, Asian, American Indian */
		if T0409 = 2 and Racenum = 110 then RACETH_T = 37; /* non-Hispanic, Asian, Hawaiian Native */
		if T0409 = 2 and Racenum = 111 then RACETH_T = 38; /* non-Hispanic, Asian, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 1000 then RACETH_T = 39; /* non-Hispanic, Black */
		if T0409 = 2 and Racenum = 1001 then RACETH_T = 40; /* non-Hispanic, Black, American Indian */
		if T0409 = 2 and Racenum = 1010 then RACETH_T = 41; /* non-Hispanic, Black, Hawaiian Native */
		if T0409 = 2 and Racenum = 1011 then RACETH_T = 42; /* non-Hispanic, Black, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 1100 then RACETH_T = 43; /* non-Hispanic, Black, Asian */
		if T0409 = 2 and Racenum = 1101 then RACETH_T = 44; /* non-Hispanic, Black, Asian, American Indian */
		if T0409 = 2 and Racenum = 1110 then RACETH_T = 45; /* non-Hispanic, Black, Asian, Hawaiian Native */
		if T0409 = 2 and Racenum = 1111 then RACETH_T = 46; /* non-Hispanic, Black, Asian, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 10000 then RACETH_T = 47; /* non-Hispanic, White */
		if T0409 = 2 and Racenum = 10001 then RACETH_T = 48; /* non-Hispanic, White, American Indian */
		if T0409 = 2 and Racenum = 111 then RACETH_T = 38; /* non-Hispanic, Asian, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 1000 then RACETH_T = 39; /* non-Hispanic, Black */
		if T0409 = 2 and Racenum = 1001 then RACETH_T = 40; /* non-Hispanic, Black, American Indian */

Variable name	Variable type	Description and specifications
		if T0409 = 2 and Racenum = 1010 then RACETH_T = 41; /* non-Hispanic, Black, Hawaiian Native */
		if T0409 = 2 and Racenum = 1011 then RACETH_T = 42; /* non-Hispanic, Black, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 111 then RACETH_T = 38; /* non-Hispanic, Asian, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 1000 then RACETH_T = 39; /* non-Hispanic, Black */
		if T0409 = 2 and Racenum = 1001 then RACETH_T = 40; /* non-Hispanic, Black, American Indian */
		if T0409 = 2 and Racenum = 1010 then RACETH_T = 41; /* non-Hispanic, Black, Hawaiian Native */
		if T0409 = 2 and Racenum = 1011 then RACETH_T = 42; /* non-Hispanic, Black, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 1100 then RACETH_T = 43; /* non-Hispanic, Black, Asian */
		if T0409 = 2 and Racenum = 1101 then RACETH_T = 44; /* non-Hispanic, Black, Asian, American Indian */
		if T0409 = 2 and Racenum = 1110 then RACETH_T = 45; /* non-Hispanic, Black, Asian, Hawaiian Native */
		if T0409 = 2 and Racenum = 1111 then RACETH_T = 46; /* non-Hispanic, Black, Asian, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 10000 then RACETH_T = 47; /* non-Hispanic, White */
		if T0409 = 2 and Racenum = 10001 then RACETH_T = 48; /* non-Hispanic, White, American Indian */
		if T0409 = 2 and Racenum = 10010 then RACETH_T = 49; /* non-Hispanic, White, Hawaiian Native */
		if T0409 = 2 and Racenum = 10011 then RACETH_T = 50; /* non-Hispanic, White, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 10100 then RACETH_T = 51; /* non-Hispanic, White, Asian */
		if T0409 = 2 and Racenum = 10101 then RACETH_T = 52; /* non-Hispanic, White, Asian, American Indian */
		if T0409 = 2 and Racenum = 10110 then RACETH_T = 53; /* non-Hispanic, White, Asian, Hawaiian Native */
		if T0409 = 2 and Racenum = 10111 then RACETH_T = 54; /* non-Hispanic, White, Asian, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 11000 then RACETH_T = 55; /* non-Hispanic, White, Black */
		if T0409 = 2 and Racenum = 11001 then RACETH_T = 56; /* non-Hispanic, White, Black, American Indian */
		if T0409 = 2 and Racenum = 11010 then RACETH_T = 57; /* non-Hispanic, White, Black, Hawaiian Native */
		if T0409 = 2 and Racenum = 11011 then RACETH_T = 58; /* non-Hispanic, White, Black, Hawaiian Native, American Indian */
		if T0409 = 2 and Racenum = 11100 then RACETH_T = 59; /* non-Hispanic, White, Black, Asian */
		if T0409 = 2 and Racenum = 11101 then RACETH_T = 60; /* non-Hispanic, White, Black, Asian, American Indian */
		if T0409 = 2 and Racenum = 11110 then RACETH_T = 61; /* non-Hispanic, White, Black, Asian, Hawaiian Native */
		if T0409 = 2 and Racenum = 11111 then RACETH_T = 62; /* non-Hispanic, White, Black, Asian, Hawaiian Native, American Indian */
		drop i; drop racenum;

Variable name	Variable type	Description and specifications
REGION	Frame	Census region where SASS district or private school is located. Origin: for public sector, GCENRG from the SASS sampling frame and for the private sector, HREGION from the SASS sampling frame. Categories include: 1 = Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; 2 = Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin; 3 = South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia; 4 = West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.
REGON_TF	Created	Census region in which the current teacher's TFS school or the former teacher's home mailing address is located. Those missing this most current data use other survey information or frame information. Categories include: 1 = Northeast; 2 = Midwest; 3 = South; 4 = West. Coded as follows: if STTUS_TF = 2 then REGON_TF = REGION; *REGION variable from SASS; if STTUS_TF in (1, 3) then do; if STATE_TF in ('09', '23', '25', '33', '34', '36', '42', '44', '50') then REGON_TF = 1; if STATE_TF in ('17', '18', '19', '20', '26', '27', '29', '31', '38', '39', '46', '55') then REGON_TF = 2; if STATE_TF in ('01', '05', '10', '11', '12', '13', '21', '22', '24', '28', '37', '40', '45', '47', '48', '51', '54') then REGON_TF = 3; if STATE_TF in ('02', '04', '06', '08', '15', '16', '30', '32', '35', '41', '49', '53', '56') then REGON_TF = 4; end;
RELIG	Created	Three-level SASS private school typology. For cases where the school was a noninterview, sample file data were used, if available. Categories include: 1 = Catholic; 2 = Other religious; 3 = Nonsectarian; -8 = Valid skip, respondent was not a private school teacher in the 2003–04 SASS. This variable was created using TYPOLOGY. Coded as follows: if typology in (1, 2, 3) then relig = 1; if typology in (4, 5, 6) then relig = 2; if typology gt 6 then relig = 3; if sector = 1 then do; if RELIG = . then RELIG = -8; end;
SC_ZIP	Frame	Five-digit ZIP code for the SASS school. Origin: for public schools and BIA schools, GCLZIP on SASS sampling frame; for private schools, ZIP5 on the Teacher Listing Form computer-assisted personal interviewing instrument (Blaise/CAPI).
SCH_ISR	Created	Interview status of SASS school where teacher was selected for sample. Categories include: 1 = Interview; 2 = Noninterview; 3 = Out of scope.

Variable name	Variable type	Description and specifications
SCHLEVE2	Created	<p>Four-category level of school based on grade levels offered as reported by the SASS school. Categories include:</p> <p>1 = Primary: schools with at least one grade lower than 5 and no grade higher than 8;</p> <p>2 = Middle: schools with no grade lower than 5 and no grade higher than 8;</p> <p>3 = High: schools with no grade lower than 7 and at least one grade higher than 8;</p> <p>4 = Combined: schools with at least one grade lower than 7 and at least one grade higher than 8. Schools with only ungraded classes were included with combined schools.</p> <p>Coded as follows: SCHLEVE2 = 1 if the lowest grade is any of grades K–4 and the highest grade is any of grades 1–8; SCHLEVE2 = 2 if the lowest grade is any of grades 5–8 and the highest is any of grades 5–8; SCHLEVE2 = 3 if the lowest grade is any of grades 7–12 and the highest grade is any of grades 9–12; SCHLEVE2 = 4 for all other cases (e.g., all ungraded, K–12, 5–12, etc.).</p> <p>Coded as follows.</p> <p>Public and BIA code:</p> <p>if S0412 = 1 then LOWEST = 12; if S0411 = 1 then LOWEST = 11; if S0410 = 1 then LOWEST = 10; if S0409 = 1 then LOWEST = 9; if S0408 = 1 then LOWEST = 8; if S0407 = 1 then LOWEST = 7; if S0406 = 1 then LOWEST = 6; if S0405 = 1 then LOWEST = 5; if S0404 = 1 then LOWEST = 4; if S0403 = 1 then LOWEST = 3; if S0402 = 1 then LOWEST = 2; if S0401 = 1 then LOWEST = 1; if S0400 = 1 then LOWEST = 0;</p> <p>if S0400 = 1 then HIGHEST = 0; if S0401 = 1 then HIGHEST = 1; if S0402 = 1 then HIGHEST = 2; if S0403 = 1 then HIGHEST = 3; if S0404 = 1 then HIGHEST = 4; if S0405 = 1 then HIGHEST = 5; if S0406 = 1 then HIGHEST = 6; if S0407 = 1 then HIGHEST = 7; if S0408 = 1 then HIGHEST = 8; if S0409 = 1 then HIGHEST = 9; if S0410 = 1 then HIGHEST = 10; if S0411 = 1 then HIGHEST = 11; if S0412 = 1 then HIGHEST = 12;</p> <p>if LOWEST le 4 and HIGHEST le 8 then SCHLEVE2 = 1; if LOWEST ge 7 and HIGHEST ge 9 then SCHLEVE2 = 3; if LOWEST ge 5 and HIGHEST le 8 then SCHLEVE2 = 2; if LOWEST le 6 and HIGHEST ge 9 then SCHLEVE2 = 4; if S0413 = 1 and LOWEST lt 1 and HIGHEST lt 1 then SCHLEVE2 = 4;</p> <p>Private code:</p> <p>if S0732 = 1 then LOWEST = 12; if S0730 = 1 then LOWEST = 11; if S0728 = 1 then LOWEST = 10; if S0726 = 1 then LOWEST = 9; if S0724 = 1 then LOWEST = 8; if S0722 = 1 then LOWEST = 7; if S0720 = 1 then LOWEST = 6; if S0718 = 1 then LOWEST = 5; if S0716 = 1 then LOWEST = 4; if S0714 = 1 then LOWEST = 3; if S0712 = 1 then LOWEST = 2; if S0710 = 1 or S0708 = 1 then LOWEST = 1; if S0704 = 1 or S0706 = 1 then LOWEST = 0;</p> <p>if S0704 = 1 or S0706 = 1 then HIGHEST = 0; if S0710 = 1 or S0708 = 1 then HIGHEST = 1; if S0712 = 1 then HIGHEST = 2; if S0714 = 1 then HIGHEST = 3; if S0716 = 1 then HIGHEST = 4; if S0718 = 1 then HIGHEST = 5; if S0720 = 1 then HIGHEST = 6; if S0722 = 1 then HIGHEST = 7; if S0724 = 1 then HIGHEST = 8; if S0726 = 1 then HIGHEST = 9; if S0728 = 1 then HIGHEST = 10; if S0730 = 1 then HIGHEST = 11; if S0732 = 1 then HIGHEST = 12;</p> <p>if LOWEST le 4 and HIGHEST le 8 then SCHLEVE2 = 1; if LOWEST ge 7 and HIGHEST ge 9 then SCHLEVE2 = 3; if LOWEST ge 5 and HIGHEST le 8 then SCHLEVE2 = 2; if LOWEST le 6 and HIGHEST ge 9 then SCHLEVE2 = 4; if S0700 = 1 and LOWEST lt 1 and HIGHEST lt 1 then SCHLEVE2 = 4;</p>

Variable name	Variable type	Description and specifications
SCHLEVEL	Created	<p>Three-category level of SASS school based on grade levels offered as reported by the SASS school. Categories include:</p> <p>1 = Elementary; 2 = Secondary; 3 = Combined.</p> <p>Coded as follows: SCHLEVEL = 1 if school has any of grades K–6 and none of grades 9–12 (elementary); SCHLEVEL = 2 if school has any of grades 7–12 and none of grades K–6 (secondary); SCHLEVEL = 3 for all other cases (combined). For cases where the school was a noninterview, the sample file information was used.</p> <p>Public schools: ARRAY t(400:413) s0400–s0413; do i = 400 to 413; if t(i) = -8 then t(i) = .; end; EDKG6 = SUM(OF s0400 S0401 S0402 S0403 S0404 S0405 S0406); ED912 = SUM(OF s0409 s0410 s0411 s0412); ED712 = SUM(OF s0407 s0408 s0409 s0410 s0411 s0412); IF EDKG6 >= 1 AND ED912 < 1 AND S0413 < 1 THEN SCHLEVEL = 1; ELSE IF S0413 = 1 AND EDKG6 >= 1 AND ED912 < 1 THEN SCHLEVEL = 1; ELSE IF S0413 < 1 AND EDKG6 < 1 THEN SCHLEVEL = 2; ELSE IF S0413 = 1 AND EDKG6 < 1 AND ED712 >= 1 THEN SCHLEVEL=2; ELSE SCHLEVEL=3; ARRAY t(400:413) s0400–s0413; do i = 400 to 413; if t(i) = . then t(i) = -8; end;</p> <p>Private schools: edkg6 = 0; ed912 = 0; ed712 = 0; Array elem[9] s0704 s0706 s0708 s0710 s0712 s0714 s0716 s0718 s0720; do i = 1 to 9; if elem [i] = 1 then edkg6 + 1; drop I; end; Array sec[4] s0726 s0728 s0730 s0732; do I = 1 to 4; if sec[I] = 1 then ed912+1; drop I; end; Array comb[6] s0722 s0724 s0726 s0728 s0730 s0732; do i = 1 to 6; if comb[I] = 1 then ed712+1; drop i; IF EDKG6 >= 1 AND ED912 < 1 AND s0700 = 2 THEN SCHLEVEL=1; ELSE IF s0700 = 1 AND EDKG6 >= 1 AND ED912 < 1 THEN SCHLEVEL = 1; ELSE IF s0700 = 2 AND EDKG6 < 1 THEN SCHLEVEL = 2; ELSE IF s0700 = 1 AND EDKG6 < 1 AND ED712 >= 1 THEN SCHLEVEL = 2; ELSE SCHLEVEL = 3; end;</p>
SCHSIZE	Created	<p>Categorical measure of the total K–12 and ungraded enrollment in the SASS school. Categories include:</p> <p>1 = 1–49; 2 = 50–99; 3 = 100–149; 4 = 150–199; 5 = 200–349; 6 = 350–499; 7 = 500–749; 8 = 750–999; 9 = 1,000–1,199; 10 = 1,200–1,499; 11 = 1,500–1,999; 12 = 2,000 or more.</p> <p>For cases where the school was a noninterview, sample file information was used. Coded as follows: if 1 le ENRK12UG lt 50 then SCHSIZE = 1; if 50 le ENRK12UG le 99 then SCHSIZE = 2; if 100 le ENRK12UG le 149 then SCHSIZE = 3; if 150 le ENRK12UG le 199 then SCHSIZE = 4; if 200 le ENRK12UG le 349 then SCHSIZE = 5; if 350 le ENRK12UG le 499 then SCHSIZE = 6; if 500 le ENRK12UG le 749 then SCHSIZE = 7; if 750 le ENRK12UG le 999 then SCHSIZE = 8; if 1000 le ENRK12UG le 1199 then SCHSIZE = 9; if 1200 le ENRK12UG le 1499 then SCHSIZE = 10; if 1500 le ENRK12UG le 1999 then SCHSIZE = 11; if ENRK12UG ge 2000 then SCHSIZE = 12;</p>

Variable name	Variable type	Description and specifications
SCWT1FLG	Frame	SASS school-wide Title I program eligibility identifier. A program in which all the pupils in a school are designated under appropriate state and federal regulations as being eligible for participation in programs authorized by Title I of Public Law 103-382. Origin: STITLI01 from 2001–02 CCD. Categories include: 1 = School is eligible for school-wide Title I program; 2 = School is not eligible for school-wide Title I program; -8 = Valid skip, respondent taught in a private school in the 2003–04 SASS.
SECTOR	Frame	SASS school sector, determined by classification on sampling frames and/or survey data. Categories include: 1 = Public; 2 = Private.
SLOCP_03	Frame	2000 Decennial Census school locale code based on the SASS school's physical location relative to a populous area. Micropolitan areas are new, smaller designated metropolitan areas with populations as low as 10,000 residents. For more information on Core Based Statistical Areas see http://www.census.gov/population/www/estimates/aboutmetro.html or see <i>Documentation for the 2003–04 Schools and Staffing Survey</i> (NCES 2007-337). Origin: LOCALE03 from 2003–04 CCD. Categories include: 1 = Large city: A central city of a Core Based Statistical Area (CBSA) or Consolidated Statistical Area (CSA), with the city having a population greater than or equal to 250,000; 2 = Mid-size city: A central city of a CBSA or CSA, with the city having a population less than 250,000; 3 = Urban fringe of a large city: Any incorporated place, Census designated place, or non-place territory within a CBSA or CSA of a Large City and defined as urban by the Census Bureau; 4 = Urban fringe of a mid-size city: Any incorporated place, Census designated place, or non-place territory within a CBSA or CSA of a Mid-size City and defined as urban by the Census Bureau; 5 = Large town: An incorporated place or Census designated place with a population greater than or equal to 25,000 and located outside a CBSA or CSA; 6 = Small town: An incorporated place or Census designated place with population less than 25,000 and greater than or equal to 2,500 and located outside a CBSA or CSA; 7 = Rural, outside CBSA: Any incorporated place, Census designated place, or non-place territory not within a CBSA or CSA of a large or mid-size city and defined as rural by the Census Bureau; 8 = Rural, inside CBSA: Any incorporated place, Census designated place, or non-place territory within a CBSA or CSA of a large or mid-size city and defined as rural by the Census Bureau.
SRVEY_TF	Frame	TFS Questionnaire used to collect data from the respondent. Categories include: 1 = Former teacher (TFS-2); 2 = Current teacher (TFS-3). Coded as follows: if UP_TFS_TYPE = 3 then SRVEY_TF = 1; Else if UP_TFS_TYPE in (1, 2) then SRVEY_TF = 2;

Variable name	Variable type	Description and specifications																																																																																																								
STABB_TF	Created	<p>Provides the two-letter state abbreviation for the state in which the current teacher’s TFS school or the former teacher’s home mailing address is located. Missing data were filled with other survey or frame information. Source of data is identified in flag variable, FL_STATF.</p> <p>Coded as follows: if STTUS_TF = 2 then STABB_TF = STAT_ABB; if STTUS_TF = 3 then do; STABB_TF = f9010; else if f5244 ne . then STABB_TF = f5244; else STABB_TF = final_state; end; if STTUS_TF = 1 then do; if f5244 ne . then STABB_TF = f5244; else STABB_TF = final_state; end;</p>																																																																																																								
STATE	Frame	<p>FIPS state code that identifies the state where the SASS private school is located or the state with administrative control over the SASS public district and the schools within that district. Origin: for public schools, GFIPST on the SASS sampling frame; for private schools, FIPS on the 2001–02 PSS. Department of Defense (DoD) and Bureau of Indian Affairs (BIA) school locations are based on the physical location of the school. For a complete list of FIPS codes, reference http://www.itl.nist.gov/fipspubs/fip5-2.htm.</p> <table border="0"> <tbody> <tr><td>Alabama</td><td>01</td><td>Montana</td><td>30</td></tr> <tr><td>Alaska</td><td>02</td><td>Nebraska</td><td>31</td></tr> <tr><td>Arizona</td><td>04</td><td>Nevada</td><td>32</td></tr> <tr><td>Arkansas</td><td>05</td><td>New Hampshire</td><td>33</td></tr> <tr><td>California</td><td>06</td><td>New Jersey</td><td>34</td></tr> <tr><td>Colorado</td><td>08</td><td>New Mexico</td><td>35</td></tr> <tr><td>Connecticut</td><td>09</td><td>New York</td><td>36</td></tr> <tr><td>Delaware</td><td>10</td><td>North Carolina</td><td>37</td></tr> <tr><td>District of Columbia</td><td>11</td><td>North Dakota</td><td>38</td></tr> <tr><td>Florida</td><td>12</td><td>Ohio</td><td>39</td></tr> <tr><td>Georgia</td><td>13</td><td>Oklahoma</td><td>40</td></tr> <tr><td>Hawaii</td><td>15</td><td>Oregon</td><td>41</td></tr> <tr><td>Idaho</td><td>16</td><td>Pennsylvania</td><td>42</td></tr> <tr><td>Illinois</td><td>17</td><td>Rhode Island</td><td>44</td></tr> <tr><td>Indiana</td><td>18</td><td>South Carolina</td><td>45</td></tr> <tr><td>Iowa</td><td>19</td><td>South Dakota</td><td>46</td></tr> <tr><td>Kansas</td><td>20</td><td>Tennessee</td><td>47</td></tr> <tr><td>Kentucky</td><td>21</td><td>Texas</td><td>48</td></tr> <tr><td>Louisiana</td><td>22</td><td>Utah</td><td>49</td></tr> <tr><td>Maine</td><td>23</td><td>Vermont</td><td>50</td></tr> <tr><td>Maryland</td><td>24</td><td>Virginia</td><td>51</td></tr> <tr><td>Massachusetts</td><td>25</td><td>Washington</td><td>53</td></tr> <tr><td>Michigan</td><td>26</td><td>West Virginia</td><td>54</td></tr> <tr><td>Minnesota</td><td>27</td><td>Wisconsin</td><td>55</td></tr> <tr><td>Mississippi</td><td>28</td><td>Wyoming</td><td>56</td></tr> <tr><td>Missouri</td><td>29</td><td></td><td></td></tr> </tbody> </table>	Alabama	01	Montana	30	Alaska	02	Nebraska	31	Arizona	04	Nevada	32	Arkansas	05	New Hampshire	33	California	06	New Jersey	34	Colorado	08	New Mexico	35	Connecticut	09	New York	36	Delaware	10	North Carolina	37	District of Columbia	11	North Dakota	38	Florida	12	Ohio	39	Georgia	13	Oklahoma	40	Hawaii	15	Oregon	41	Idaho	16	Pennsylvania	42	Illinois	17	Rhode Island	44	Indiana	18	South Carolina	45	Iowa	19	South Dakota	46	Kansas	20	Tennessee	47	Kentucky	21	Texas	48	Louisiana	22	Utah	49	Maine	23	Vermont	50	Maryland	24	Virginia	51	Massachusetts	25	Washington	53	Michigan	26	West Virginia	54	Minnesota	27	Wisconsin	55	Mississippi	28	Wyoming	56	Missouri	29		
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Variable name	Variable type	Description and specifications
STATE_TF	Created	<p>The state (FIPS code) in which the current teacher's TFS school or the former teacher's home mailing address is located. Missing data were filled with other survey or frame information. Source of data is identified in flag variable, FL_STATF. Coded as follows: if STTUS_TF = 2 then STATE_TF = STATE; if STTUS_TF in (1, 3) then do; if STABB_TF = 'AL' then STATE_TF = '01'; if STABB_TF = 'AK' then STATE_TF = '02'; if STABB_TF = 'AZ' then STATE_TF = '04'; if STABB_TF = 'AR' then STATE_TF = '05'; if STABB_TF = 'CA' then STATE_TF = '06'; if STABB_TF = 'CO' then STATE_TF = '08'; if STABB_TF = 'CT' then STATE_TF = '09'; if STABB_TF = 'DE' then STATE_TF = '10'; if STABB_TF = 'DC' then STATE_TF = '11'; if STABB_TF = 'FL' then STATE_TF = '12'; if STABB_TF = 'GA' then STATE_TF = '13'; if STABB_TF = 'HI' then STATE_TF = '15'; if STABB_TF = 'ID' then STATE_TF = '16'; if STABB_TF = 'IL' then STATE_TF = '17'; if STABB_TF = 'IN' then STATE_TF = '18'; if STABB_TF = 'IA' then STATE_TF = '19'; if STABB_TF = 'KS' then STATE_TF = '20'; if STABB_TF = 'KY' then STATE_TF = '21'; if STABB_TF = 'LA' then STATE_TF = '22'; if STABB_TF = 'ME' then STATE_TF = '23'; if STABB_TF = 'MD' then STATE_TF = '24'; if STABB_TF = 'MA' then STATE_TF = '25'; if STABB_TF = 'MI' then STATE_TF = '26'; if STABB_TF = 'MN' then STATE_TF = '27'; if STABB_TF = 'MS' then STATE_TF = '28'; if STABB_TF = 'MO' then STATE_TF = '29'; if STABB_TF = 'MT' then STATE_TF = '30'; if STABB_TF = 'NE' then STATE_TF = '31'; if STABB_TF = 'NV' then STATE_TF = '32'; if STABB_TF = 'NH' then STATE_TF = '33'; if STABB_TF = 'NJ' then STATE_TF = '34'; if STABB_TF = 'NM' then STATE_TF = '35'; if STABB_TF = 'NY' then STATE_TF = '36'; if STABB_TF = 'NC' then STATE_TF = '37'; if STABB_TF = 'ND' then STATE_TF = '38'; if STABB_TF = 'OH' then STATE_TF = '39'; if STABB_TF = 'OK' then STATE_TF = '40'; if STABB_TF = 'OR' then STATE_TF = '41'; if STABB_TF = 'PA' then STATE_TF = '42'; if STABB_TF = 'RI' then STATE_TF = '44'; if STABB_TF = 'SC' then STATE_TF = '45'; if STABB_TF = 'SD' then STATE_TF = '46'; if STABB_TF = 'TN' then STATE_TF = '47'; if STABB_TF = 'TX' then STATE_TF = '48'; if STABB_TF = 'UT' then STATE_TF = '49'; if STABB_TF = 'VT' then STATE_TF = '50'; if STABB_TF = 'VA' then STATE_TF = '51'; if STABB_TF = 'WA' then STATE_TF = '53'; if STABB_TF = 'WV' then STATE_TF = '54'; if STABB_TF = 'WI' then STATE_TF = '55'; if STABB_TF = 'WY' then STATE_TF = '56';</p> <p>end;</p>

Variable name	Variable type	Description and specifications
STRATA	Created	<p>SASS private school orientation stratum. Categories include:</p> <p>1 = Catholic—Parochial; 2 = Catholic—Diocesan; 3 = Catholic—Private; 4 = Amish; 5 = Assembly of God; 6 = Baptist; 7 = Episcopal; 8 = Jewish; 9 = Lutheran Church—Missouri Synod; 10 = Wisconsin Evangelical Lutheran Synod; 11 = Mennonite; 12 = Pentecostal; 13 = Seventh-Day Adventist; 14 = Other Religious; 15 = Nonsectarian—Regular; 16 = Nonsectarian—Special Emphasis; 17 = Nonsectarian—Special Education; -8 = Valid skip, respondent was not a private school teacher in the 2003–04 SASS.</p> <p>Coded as follows: if typology = 1 then strata = 1; else if typology = 2 then strata = 2; else if typology = 3 then strata = 3; else if s0740 = 3 then strata = 4; else if s0740 = 4 then strata = 5; else if s0740 = 5 then strata = 6; else if s0740 = 13 then strata = 7; else if s0740 = 17 then strata = 8; else if s0740 = 19 then strata = 9; else if s0740 = 21 then strata = 10; else if s0740 = 23 then strata = 11; else if s0740 = 25 then strata = 12; else if s0740 = 27 then strata = 13; else if s0740 in (2, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 18, 20, 22, 24, 26, 28) then strata = 14; else if typology = 7 then strata = 15; else if typology = 8 then strata = 16; else if typology = 9 then strata = 17; if sector = 1 then do; if strata = . then strata = -8; end;</p>
STTUS_TF	Frame	<p>Respondents to the TFS are classified as either stayers, movers, or leavers. Stayers are teachers who were teaching in the same school in the current school year as in the base year. Movers are teachers who were still teaching but had moved to a different school after the base year. Leavers are teachers who left the teaching profession after the base year. Categories include:</p> <p>1 = Leaver; 2 = Stayer; 3 = Mover.</p> <p>Coded as follows: if SRVEY_TF = 1 then STTUS_TF = 1; if f0136 = 1 then STTUS_TF = 2; if f0136 = 2 then STTUS_TF = 3; end;</p>
STU_TCH	Created	<p>Estimated number of students per full-time equivalent teacher in the SASS school. Calculated as follows: STU_TCH = ROUND((ENRK12UG/NUMTCH),.0001);</p>

Variable name	Variable type	Description and specifications
TELEV_TF	Created	<p>Four-level variable identifying the grade levels being taught by respondents, as reported in TFS. Categories include:</p> <p>1 = Primary; 2 = Middle school; 3 = High school; 4 = Combined school.</p> <p>Coded as follows: ARRAY f(58:72) F0058-F0072; do i = 58 to 72; if f(i) = -8 then f(i) = . ; end; if f0056 in (101, 102) then e1 = 1; else if f0056 = 110 and f0073 = 3 then sp = 1; if n(of f0059–f0071) > 0 then do; if n(of f0069–f0071) > 0 then TELEV_TF = 3; else if f0068 = 1 & n(of f0059–f0067, f0069–f0071)=0 then TELEV_TF = 3; else if n(of f0059–f0063) > 0 & n(of f0064–f0071)=0 then TELEV_TF = 1; else if e1=1 then TELEV_TF = 1; else if sp=1 then TELEV_TF = 1; else TELEV_TF = 2; end; else do; TELEV_TF = 4; end; ARRAY f(58:72) F0058-F0072; do i = 58 to 72; if b(i) = . then b(i) = -8; end;</p>
TLEV2_03	Created	<p>Divides teachers into elementary or secondary based on a combination of the grades taught, main teaching assignment, and the structure of their classes during the SASS school year. Those with only ungraded classes are categorized as elementary level teachers if their main assignment is early childhood/pre-K or elementary, or they teach either special education in a self-contained classroom or an elementary enrichment class. All other teachers with ungraded classes are classified as secondary level. Among teachers with regularly graded classes, in general, elementary level teachers teach any of grades pre-K through 5th; report an early childhood/pre-K, elementary, self-contained special education, or elementary enrichment main assignment; or teachers whose preponderance of grades taught are kindergarten through 6th. In general, secondary-level teachers instruct any of grades 7 through 12 but usually no grade lower than 5th. They also teach more of grades 7 through 12 than lower level grades.</p> <p>Categories include:</p> <p>1 = Elementary; 2 = Secondary.</p> <p>Coded as follows:</p> <pre>array t(51:75) t0051–t0075; do i = 51 to 75; if t(i) = -8 then t(i) = .; end; if T0065 = 1 and sum(of T0051–T0064) < 1 then do; /* UNGRADED, AND NO PRE-K - 12 */ if ((T0069 = 110 or T0075 = 110) and T0066 = 3) or T0069 in (101, 102) or T0075 in (101, 102) or t0066 = 2 then TLEV2_03 = 1; /*ELEMENTARY*/ else TLEV2_03 = 2; /*SECONDARY*/ end; else if sum(of T0051–T0057) > 0 and /*PRE-K–5TH*/ sum(of T0062–T0064) < 1 /*NO 10TH–12*/ then TLEV2_03 = 1; else if sum(of T0051–T0057) < 1 and /*NO PRE-K–5TH*/ sum(of T0061–T0064) > 0 /*9TH–12TH*/ then TLEV2_03 = 2; else if T0059 >= 1 or T0060 >= 1 or /*7TH OR 8TH*/ (sum(of T0051–T0058)>0 and /*OR PRE-K–6TH AND 9TH–12TH*/ sum(of T0061–T0064)>0) then do; if T0069 in (101, 102) or T0075 in (101, 102) or T0066 = 2 then TLEV2_03 = 1; /*PRE-K,KG,GEN.ELEM or ELEM ENRICH*/ else if T0069 = 110 or T0075 = 110 then do; /*SPECIAL ED*/ if T0066 = 3 then TLEV2_03 = 1; /*IF SELF-CONTAINED, THEN ELEMENTARY*/ else TLEV2_03 = 2; /*ALL OTHERS, SECONDARY*/ end; else if sum(of T0057-T0061)>0 and /*5TH–9TH*/ sum(of T0065, T0051- T0056)<1 then TLEV2_03 = 2; /*UG–4TH*/</pre>

Variable name	Variable type	Description and specifications
		<pre> else if T0066 = 2 then TLEV2_03 = 1; /*ELEM ENRICHMENT*/ else if sum(of T0059–T0064) = 6 and /*7TH–12TH*/ (T0069 >= 141 or T0075 >= 141) then TLEV2_03 = 2; else if sum(of T0053–T0058) = 6 and /*1ST–6TH*/ (T0069 in (101, 102) or T0075 in (101, 102)) then TLEV2_03 = 1; else if sum(of T0053–T0058) > /*1ST–6TH*/ sum(of T0059–T0064) then TLEV2_03 = 1; /*7TH–12TH*/ else if sum(of T0053–T0058) < /*1ST–6TH*/ sum(of T0059–T0064) then TLEV2_03 = 2; /*7TH–12TH*/ else if sum(of T0053–T0058) = /*1ST–6TH*/ sum(of T0059–T0064) then do; /*7TH–12TH*/ if T0069 in (101, 102, 110) or T0075 in (101, 102, 110) or t0066 = 2 then TLEV2_03 = 1; /*ELEMENTARY*/ else TLEV2_03 = 2; /*SECONDARY*/ end; end; else if sum(of T0052–T0057) > /*K–5TH*/ sum(of T0059–T0064) then TLEV2_03 = 1; /*7TH–12TH*/ else if sum(of T0052–T0057) < /*K–5TH*/ sum(of T0059–T0064) then TLEV2_03 = 2; /*7TH–12TH*/ else if T0069 = 102 or T0075 = 102 then TLEV2_03 = 1; /*KG & GENL ELEM*/ else if (T0069 = 110 or T0075 = 110) and /*special ed*/ T0066 = 3 then TLEV2_03 = 1; /*self-cont*/ else if T0066 = 2 then TLEV2_03 = 1; /*elem enrich*/ else TLEV2_03 = 2; array t(51:75) t0051–t0075; do i = 51 to 75; if t(i) = . then t(i) = -8; end; </pre>
TOTEXPER	Created	<p>SASS teacher’s total number of years teaching full or part time in public and private schools. Calculated as follows: ARRAY t(36:40) t0036–t0040; do i = 36 to 40; if t(i) = -8 then t(i) = .; end; totexper = sum (t0036, t0037, t0039, t0040); ARRAY t(36:40) t0036–t0040; do i = 36 to 40; if t(i) = . then t(i) = -8; end;</p>
TTEXP_TF	Created	<p>TFS teacher’s total number of years teaching full or part time in public and private schools. For leavers, TTEXP_TF equals the total years of teaching experience (TOTEXPER) as reported on the SASS teacher record. For stayers and movers, 1 year is added to TOTEXPER to include the 2004–05 school year. Coded as follows: if SRVEY_TF = 1 then TTEXP_TF = TOTEXPER; if SRVEY_TF = 2 the TTEXP_TF = sum (TOTEXPER, 1);</p>

Variable name	Variable type	Description and specifications
TYPOLOGY	Created	<p>Nine-level SASS private school typology. Categories include:</p> <p>1 = Catholic—Parochial; 2 = Catholic—Diocesan; 3 = Catholic—Private; 4 = Other religious, Conservative Christian; 5 = Other religious, Affiliated with a Religious School Association; 6 = Other religious, Not Affiliated with a Religious School Association; 7 = Nonsectarian—Regular; 8 = Nonsectarian—Special Emphasis; 9 = Nonsectarian—Special Education; -8 = Valid skip, respondent was not a private school teacher in the 2003–04 SASS.</p> <p>Coded as follows: if s0740 = 1 then do; if s0741 = 1 then typology = 1; else if s0741 = 2 then typology = 2; else if s0741 = 3 then typology = 3; end; else if s0738 = 1 then do; if s0743 = 1 or s0744 = 1 or s0745 = 1 or s0758 = 1 then typology = 4; else if s0746 = 1 or s0747 = 1 or s0748 = 1 or s0749 = 1 or s0750 = 1 or s0751 = 1 or s0752 = 1 or s0754 = 1 or s0756 = 1 or s0757 = 1 or s0759 = 1 or s0760 = 1 or s0761 = 1 then typology = 5; else typology = 6; end; else if s0441 in (1, 7) then typology = 7; else if s0441 in (2, 3, 5, 6) then typology = 8; else if s0441 in (4) then typology = 9; if sector = 1 then do; if TYPOLOGY = . then TYPOLOGY = -8; end;</p>
UNION_S	Created	<p>Variable showing whether teacher was a member of a teacher’s union or similar employee association during the SASS school year. Categories include:</p> <p>1 = Yes; 2 = No.</p> <p>Copied from T0407.</p>
URBANS03	Frame	<p>This is a 3-level collapse of SLOCP_03 (SASS school locale code). Code was assigned using 2000 Decennial Census data. Categories include:</p> <p>1 = Large or mid-size central city; 2 = Urban fringe of large or mid-size central city; 3 = Small town/rural.</p> <p>Coded as follows: if slocp_03 in (1, 2) then urbans03 = 1; if slocp_03 in (3, 4, 5, 8) then urbans03 = 2; if slocp_03 in (6, 7) then urbans03 = 3.</p>
ZIP_TF	Created	<p>The ZIP code in which the current teacher’s TFS school or the former teacher’s home mailing address is located. Missing data were filled with other survey or frame information. Source of data is identified in flag variable, FL_ZIPTF.</p> <p>Coded as follows: if STTUS_TF = 2 then ZIP_TF = SC_ZIP; if STTUS_TF = 3 then do; if f9010 ne . then ZIP_TF = f9015; else if f5245 ne . then ZIP_TF = . then ZIP_TF = f5245; else ZIP_TF = final_zip; end; if STTUS_TF = 1 then do; if f5245 ne . then ZIP_TF = f5245; else ZIP_TF = final_zip; end;</p>

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Appendix K. Crosswalk of 2004–05 TFS Items With 2000–01 TFS and 2003–04 SASS Teacher Questionnaire

The crosswalks are presented in the following order:

Crosswalk of 2004–05 Former Teacher Questionnaire with 2000–01 Former Teacher Questionnaire	K-2
Crosswalk of 2004–05 Current Teacher Questionnaire with 2000–01 Current Teacher Questionnaire and 2003–04 SASS Teacher Questionnaire.....	K-5

The crosswalk for the current teacher questionnaire includes a comparison to the 2003–04 Schools and Staffing Survey (SASS) Teacher Questionnaire because many items on the Current Teacher Questionnaire were drawn from the 2003–04 SASS in order to provide direct comparisons in the teacher’s responses to various items between the 2003–04 and 2004–05 school years.

Within each questionnaire crosswalk, variables are listed in 2004–05 item order. If there is a blank in the variable’s name for the 2000–01 TFS or the 2003–04 SASS, then that particular 2004–05 item did not have an equivalent item in the other survey administrations. Variables from the 2000–01 TFS and the 2003–04 SASS are graded on how closely they “match” the corresponding variable in the 2004–05 questionnaires:

- *Exact.* The question wording and format are exactly the same.
- *Near.* The question content is the same, but there have been minor changes to the question wording or format.
- *Content.* The general content of or subject addressed by the item is the same, but the question wording or format has been changed significantly.

Crosswalk of 2004–05 Former Teacher Questionnaire with 2000–01 Former Teacher Questionnaire			
2004–05 TFS		2000–01 TFS	
Variable name	Variable name	Match	Comments
F0050	F0050	Content	Did not include pre-K teachers
F0550			
F0051	F0051	Near	
F0552	F0052	Near	
F5552			
F0553	F0053	Near	
F5553	F5053	Exact	
F0554			
F5555	F5055	Near	
F5556	F9055	Near	
F0557	F0056	Exact	
F0558	F0057	Exact	
F0559	F0058	Near	
F0560			
F0561			
F0562	F0059	Content	New response categories
F0563			
F0564			
F0214	F0078	Content	Asked only about a teacher retirement system
F0565	F0088	Near	
F0566	F0089	Near	
F0567	F0061	Near	
F0568	F0062	Near	
F0569	F0063	Near	
F0570	F0064	Near	
F0571	F0066	Near	
F0572	F0068	Near	
F0573	F0069	Near	
F0574	F0070	Near	
F0575	F0071	Near	
F0576			
F0577			
F0578	F0077	Near	
F0579			
F0173	F0127	Content	Question wording referred to instructional leader rather than principal/school head
F0174	F0128	Content	Question wording referred to instructional leader rather than principal/school head
F0175	F0129	Content	Revised wording to response; question wording referred to instructional leader rather than principal/school head
F0176	F0130	Content	Question wording referred to instructional leader rather than principal/school head

**Crosswalk of 2004–05 Former Teacher Questionnaire with 2000–01 Former Teacher Questionnaire—
Continued**

2004–05 TFS		2000–01 TFS	
Variable name	Variable name	Match	Comments
F0177	F0131	Content	Question wording referred to instructional leader rather than principal/school head
F0178	F0132	Content	Revised wording to response; question wording referred to instructional leader rather than principal/school head
F0179	F0133	Content	Revised wording to response; question wording referred to instructional leader rather than principal/school head
F0180	F0134	Content	Question wording referred to instructional leader rather than principal/school head
F0181			
F0182			
F0183			
F0184			
F0185			
F0186			
F0187			
F0580	F0135	Near	
F0581	F0136	Near	
F0582	F0145	Near	
F0583	F0137	Near	
F0584	F0138	Near	
F0585	F0139	Near	
F0586			
F0587	F0140	Near	
F0588	F0141	Near	
F0589	F0142	Near	
F0590	F0143	Near	
F0591	F0144	Near	
F0592	F0146	Near	
F0593	F0147	Near	
F0594			
F0595	F0148	Near	
F0596	F0149	Near	
F0597	F0150	Near	
F0598	F0152	Near	
F0599			
F0600			
F0601	F0153	Near	
F0208	F0154	Content	Asked about degrees earned, rather than enrollment in courses
F0209	F0157	Content	Asked about type of degree, rather than description of enrollment
F0210	F0159–F0165	Near	
F0211			
F0602	F0176	Near	

**Crosswalk of 2004–05 Former Teacher Questionnaire with 2000–01 Former Teacher Questionnaire—
Continued**

2004–05 TFS	2000–01 TFS		
Variable name	Variable name	Match	Comments
F0603	F0184	Near	
F0604	F0179	Near	
F0605	F0180	Near	
F0606	F0181	Near	
F0607			
F0608			
F0609			
F0610			
F0611	F0182	Near	
F5611	F5182	Near	
F9611	F5182	Near	
F0612			
F0613	F0183	Near	
F0231	F0194	Content	Response categories are comparable, but have been revised
F0232	F0196	Content	Asked about dependents rather than household size
F0233	F0197	Near	
F0234			
F0235	F0195	Near	
F0236			
F0237			
F0238			
F0278			
F0279			
F5238			

**Crosswalk of 2004–05 Current Teacher Questionnaire with 2000–01 Current Teacher Questionnaire
and 2003–04 SASS Teacher Questionnaire**

2004–05 TFS	2000–01 TFS			2003–04 SASS Teacher Questionnaire		
Variable name	Variable name	Match	Comments	Variable name	Match	Comments
F0050	F0050	Content	Did not include pre-K teachers	T0028	Content	Did not include pre-K teachers
F0051	F0051	Near		T0026	Near	
F0052	F0552	Exact		T0029	Near	
F0053	F0553	Near				
F0054	F0554	Exact				
F0055	F0555	Near				
F5055	F5555	Exact				
F0056	F0556	Content	Teaching assignment codes changed	T0069	Near	
F5056	F5556	Content	Teaching assignment codes changed	T5069	Near	
F0057	F0558	Content	Asked about certificate in main assignment; fewer response categories	T0166	Near	
F0058	F0564	Near		T0051	Near	
F0059	F0565	Near		T0052	Near	
F0060	F0566	Near		T0053	Near	
F0061	F0567	Near		T0054	Near	
F0062	F0568	Near		T0055	Near	
F0063	F0569	Near		T0056	Near	
F0064	F0570	Near		T0057	Near	
F0065	F0571	Near		T0058	Near	
F0066	F0572	Near		T0059	Near	
F0067	F0573	Near		T0060	Near	
F0068	F0574	Near		T0061	Near	
F0069	F0575	Near		T0062	Near	
F0070	F0576	Near		T0063	Near	
F0071	F0577	Near		T0064	Near	
F0072	F0563	Near		T0065	Near	
F0073				T0066	Near	
F0074				T0279	Content	Asked for number of students rather than percentage
F0075				T0284	Content	Asked for number of students rather than percentage
F0076				T0330	Near	
F0077	F0622 & F0804	Content	Change in wording of main question and in response categories	T0331	Near	
F0078	F0579	Content	Change in response categories	T0332	Near	
F0079				T0333	Near	
F0080	F0589	Content	Change in wording of item and response categories	T0334	Near	

**Crosswalk of 2004–05 Current Teacher Questionnaire with 2000–01 Current Teacher Questionnaire
and 2003–04 SASS Teacher Questionnaire—Continued**

2004–05 TFS	2000–01 TFS			2003–04 SASS Teacher Questionnaire		
Variable name	Variable name	Match	Comments	Variable name	Match	Comments
F0081	F0599	Content	Change in wording of item and response categories	T0335	Near	
F0082				T0336	Near	
F0083	F0623	Content	Change in wording of main question and in response categories	T0337	Near	
F0084				T0338	Near	
F0085	F0624		Change in wording of main question and in response categories	T0339	Near	
F0086				T0340	Near	
F0087	F0625		Change in wording of main question and in response categories	T0341	Near	
F0088				T0342	Near	
F0089				T0343	Near	
F0090				T0344	Near	
F0091	F0593		Change in wording of item and response categories	T0345	Near	
F0092	F0605			Change in wording of item and response categories	T0346	Near
F0093			T0347		Near	
F0094			T0348		Near	
F0095			T0349		Near	
F0096	F0609		Change in question wording and response categories	T0350	Near	
F0097				T0351	Near	
F0098				T0352	Near	
F0099				T0353	Near	
F0100				T0354	Near	
F0101				T0355	Near	
F0102				T0356	Near	
F0103			T0357	Near		
F0104			T0358	Near		
F0105			T0359	Near		
F0106			T0360	Near		
F0107			T0361	Near		
F0108			T0362	Near		
F0109			T0363	Near		
F0110			T0364	Near		

**Crosswalk of 2004–05 Current Teacher Questionnaire with 2000–01 Current Teacher Questionnaire
and 2003–04 SASS Teacher Questionnaire—Continued**

2004–05 TFS	2000–01 TFS			2003–04 SASS Teacher Questionnaire		
Variable name	Variable name	Match	Comments	Variable name	Match	Comments
F0111				T0365	Near	
F0112				T0366	Near	
F0113				T0367	Near	
F0114				T0368	Near	
F0115				T0369	Near	
F0116				T0370	Near	
F0117				T0371	Near	
F0118				T0372	Near	
F0119				T0373	Near	
F0120				T0374	Near	
F0121				T0375	Near	
F0122				T0376	Near	
F0123				T0377	Near	
F0124				T0378	Near	
F0125				T0379	Near	
F0126				T0380	Near	
F0127				T0381	Near	
F0128				T0297	Near	
F0129				T0298	Near	
F0130				T0299	Near	
F0131				T0300	Exact	
F0132				T0301	Exact	
F0133				T0302	Exact	
F0134				T0303	Exact	
F0135				T0304	Exact	
F0136	F0692	Exact				
F0137	F0697	Near				
F0138						
F5138	F0698	Near				
F9000	F0693	Exact				
F9005						
F9010	F0694	Exact				
F9015	F0696	Exact				
F9020	F0695	Exact				
F9025						
F0144						
F0145						
F0146						
F0147						
F0148						

**Crosswalk of 2004–05 Current Teacher Questionnaire with 2000–01 Current Teacher Questionnaire
and 2003–04 SASS Teacher Questionnaire—Continued**

2004–05 TFS	2000–01 TFS			2003–04 SASS Teacher Questionnaire		
Variable name	Variable name	Match	Comments	Variable name	Match	Comments
F0149						
F0150						
F0151						
F0152						
F0153						
F0154						
F0155						
F0156						
F0157						
F0158						
F0159	F0700	Near				
F0160	F0701	Near				
F0161	F0748	Content	Asked about change in residence			
F0162	F0749	Near				
F0163	F0750	Near				
F0164	F0751	Near				
F0165	F0752	Near				
F0166	F0753	Near				
F0167	F0754	Near				
F0168	F0757	Near				
F0169	F0758	Near				
F0170	F0759	Near				
F0171	F0760	Near				
F0172						
F0173	F0127	Content	Question wording referred to instructional leader rather than principal/ school head			
F0174	F0128	Content	Question wording referred to instructional leader rather than principal/ school head			
F0175	F0129	Content	Revised wording to response; question wording referred to instructional leader rather than principal/school head			
F0176	F0130	Content	Question wording referred to instructional leader rather than principal/ school head			
F0177	F0131	Content	Question wording referred to instructional leader rather than principal/ school head			

**Crosswalk of 2004–05 Current Teacher Questionnaire with 2000–01 Current Teacher Questionnaire
and 2003–04 SASS Teacher Questionnaire—Continued**

2004–05 TFS	2000–01 TFS			2003–04 SASS Teacher Questionnaire		
Variable name	Variable name	Match	Comments	Variable name	Match	Comments
F0178	F0132	Content	Revised wording to response; question wording referred to instructional leader rather than principal/school head			
F0179	F0133	Content	Revised wording to response; question wording referred to instructional leader rather than principal/school head			
F0180	F0134	Content	Question wording referred to instructional leader rather than principal/ school head			
F0181						
F0182						
F0183						
F0184						
F0185						
F0186						
F0187						
F0188						
F0189						
F0190						
F0191						
F0192						
F0193						
F0194						
F0195						
F0196						
F0197						
F0198						
F0199						
F0200						
F0201						
F0202						
F0203						
F0204						
F0205						
F0206						
F0207						
F0208	F0154	Content	Asked about degrees earned, rather than enrollment in courses			

**Crosswalk of 2004–05 Current Teacher Questionnaire with 2000–01 Current Teacher Questionnaire
and 2003–04 SASS Teacher Questionnaire—Continued**

2004–05 TFS	2000–01 TFS			2003–04 SASS Teacher Questionnaire		
Variable name	Variable name	Match	Comments	Variable name	Match	Comments
F0209	F0157	Content	Asked about type of degree, rather than description of enrollment			
F0210	F0159– F0165	Near				
F0211						
F0212	F0783	Content	Revised response categories	T0383	Content	Revised response categories
F0213						
F0214						
F0215						
F0216						
F0217	F0790	Near		T0393	Near	
F0218	F0791	Near		T0394	Near	
F0219	F0792	Near		T0395	Near	
F0220	F0793	Near		T0396	Near	
F0221	F0794	Near		T0397	Near	
F0222	F0795	Near		T0398	Near	
F0223	F0796	Near		T0399	Near	
F0224	F0797	Near		T0400	Near	
F0225	F0798	Near		T0401	Near	
F0226	F0799	Near		T0402	Near	
F0227	F0800	Near		T0403	Near	
F0228	F0801	Near		T0404	Near	
F0229	F0802	Near		T0405	Near	
F0230	F0803	Near		T0406	Near	
F0231	F0194	Content	Response categories are comparable, but have been revised			
F0232	F0196	Content	Asked about dependents rather than household size			
F0233	F0197	Near				
F0234						
F0235	F0195	Near				
F0236						
F0237						
F0238						
F0278						
F0279						
F5238						